Spring 2012

Nebraska State Accountability (NeSA)

Reading Operational and Field Test

Mathematics Operational and Field Test

Science Operational and Field Test

Technical Report

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1. Background

1.1 Purpose and organization of this report

This report documents the technical aspects of the 2012 Nebraska Reading (NeSA-R), Mathematics (NeSA-M), and Nebraska Science (NeSA-S) operational tests, along with the NeSA-R, NeSA-M and NeSA-S embedded field tests, covering details of item and test development process, administration procedures, and psychometric methods and summaries.

1.2 Background of the Nebraska Student Assessment (NeSA)

Previous Nebraska Assessments: In previous years, Nebraska administered a blend of local and state-generated assessments to meet NCLB requirements called STARS (School-based Teacher-led Assessment and Reporting System). STARS was a decentralized local assessment system that measured academic content standards in reading, mathematics, and science. The state reviewed every local assessment system for compliance and technical quality. The Nebraska Department of Education (NDE) provided guidance and support for Nebraska educators by training them to develop and use classroom-based assessments. For accreditation, districts were also required to administer national norm-referenced tests (NRT).

As a component of STARS, NDE administered one writing assessment annually in grades 4, 8, and 11. In addition, NDE provided an alternate assessment for students severely challenged by cognitive disabilities.

Purpose of the NeSA: Legislative Bill 1157 passed by the 2008 Nebraska Legislature (http://uniweb.legislature.ne.gov/FloorDocs/Current/PDF/Slip/LB1157.pdf) required a single statewide assessment of the Nebraska academic content standards for writing, reading, mathematics, and science in Nebraska's K-12 public schools. The new assessment system was named NeSA (Nebraska State Accountability), with NeSA-R for reading assessments, NeSA-M for mathematics, and NeSA-S for science. The assessments in reading and mathematics were administered in grades 3-8 and 11; science was administered in grades 5, 8, and 11 in 2012.

NeSA replaced previous school-based assessments for purposes of local, state, and federal accountability. NeSA consists entirely of multiple choice items and will be administered, to the extent practicable, online. In January 2009, the Nebraska Department of Education (NDE) contracted with Data Recognition Corporation (DRC) to support the Department of Education with the administration, record keeping, and reporting of statewide student assessment and accountability.

Phase-In Schedule for NeSA: The NDE prescribed such assessments starting in the 2009-2010 school year to be phased in as shown in Table 1.2.1. The state intends to use the expertise and experience of in-state educators to participate, to the maximum extent possible, in the design and development of the new statewide assessment system.

Table 1.2.1: NeSA Administration Schedule

Subject	Administration Year		Grades
	Field Test	Operational	
Reading	2009	2010	3 through 8 plus high school
Mathematics	2010	2011	3 through 8 plus high school
Science	2011	2012	5, 8 and 11

Advisory Committees: LB 1157 added a governor-appointed Technical Advisory Committee (TAC) with three nationally recognized experts in educational assessment, one Nebraska administrator, and one Nebraska teacher. The TAC reviewed the development plan for the NeSA, and provided technical advice, guidance, and research to help the NDE make informed decisions regarding standards, assessment, and accountability.

2. Item and Test Development

2.1 Content Standards

In April of 2008, the Nebraska Legislature passed into state law Legislative Bill 1157 (Appendix A). This action changed previous provisions related to standards, assessment, and reporting. Specific to standards, the legislation stated:

- The State Board of Education shall adopt measurable academic content standards for at least the grade levels required for statewide assessment. The standards shall cover the subject areas of reading, writing, mathematics, science, and social studies. The standards adopted shall be sufficiently clear and measurable to be used for testing student performance with respect to mastery of the content described in the state standards.
- The State Board of Education shall develop a plan to review and update standards for each subject area every five years.
- The State Board of Education shall review and update the standards in reading by July 1, 2009, the standards in mathematics by July 1, 2010, and these standards in all other subject areas by July 1, 2013.

The Nebraska Language Arts Standards are the foundation for Nebraska State Accountability – Reading (NeSA-R). This assessment instrument is comprised of items that address standards for grades 3–8 and 12. The standards are assessed at grade-level with the exception of grade 12. The grade 12 standards are assessed on the NeSA tests at grade 11. The reading standards for each grade are represented in items that are distributed between two reporting categories: Vocabulary and Comprehension. The Vocabulary standards include word structure, context clues, and semantic relationships. The Comprehension standards include author's purpose, elements of narrative text, literary devices, main idea, relevant details, text features, genre, and generating questions while reading.

The mathematics component of Nebraska State Accountability is composed of items that address indicators in grades 3–8 and high school. The standards are assessed at grade level with the exception of high school. The high school standards are assessed on the NeSA-M at grade 11. The assessable standards for each grade level are distributed among the four reporting categories: Number Sense Concepts, Geometric/Measurement Concepts, Algebraic Concepts, and Data Analysis/Probability Concepts. The National Council of Teachers of Mathematics (NCTM) and the National Assessment of Educational Progress (NAEP) standards are the foundation of the Nebraska Mathematics standards.

The science component of the Nebraska State Accountability is composed of items that address indicators in grade-band strands 3–-5, 6–8, and 9–12. The NeSA-S assesses the standards for each grade-band strand at a specific grade: 3-5 strand at grade 5, 6–8 strand at grade 8, and 9–12 strand at grade 11. The assessable standards for each grade level are distributed among the four reporting

categories: Inquiry, The Nature of Science, and Technology; Physical Science; Life Science; and Earth and Space Sciences.

2.2 Test Blueprints

The test blueprints for each assessment include lists of all the standards, organized by reporting categories. The test blueprints also contain the Depth of Knowledge level assigned to each standard and the range of test items to be part of the assessment by indicator. The NeSA-R test blueprint was developed and approved in fall 2009 (Appendix B). The NeSA-M test blueprint was developed and approved in fall 2010 (Appendix C).

2.3 Multiple-Choice Items

Each assessment incorporates multiple-choice items to assess the content standards. Students are required to select a correct answer from four response choices with a single correct answer. Each multiple-choice item is scored as right or wrong and has a value of one raw score point. Multiple-choice items are used to assess a variety of skill levels in relation to the tested standards.

2.4 Passage Selection

All items in the reading assessment were derived from a selection of narrative and informational passages. Passages acquired were “authentic” in that they were purchased from the test vendor that commissioned experienced passage writers to provide quality pieces of text. Passages were approved by a group of reading content specialists that have teaching experience at specific grade levels. These experts were given formal training on the specific requirements of the Nebraska assessment of reading. The group, under the facilitation of the NDE test development team, screened and edited passages for:

- interest and accuracy of information in a passage to a particular grade level;
- grade-level appropriateness of passage topic and vocabulary;
- rich passage content to support the development of high-quality test questions;
- bias, sensitivity, and fairness issues; and
- readability considerations and concerns.

Passages that were approved moved forward for the development of test items.

The readability of a passage was an evaluative process made by Nebraska educators, NDE’s test development team, DRC’s reading content specialists, and other individuals who understand each particular grade level and children of a particular age group. In addition, formal readability programs were also used by DRC to provide a “snapshot” of a passage’s reading difficulty based on sentence structure, length of words, etc. All of this information, along with the classroom context and content appropriateness of a passage, was taken into consideration when placing a passage at a particular grade.

2.5 Item Development and Review

The most significant considerations in the item and test development process are: aligning the items to the grade level indicators; determining the grade-level appropriateness; depth of knowledge; estimated difficulty level; and determining style, accuracy, and correct terminology. In addition, the *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 1999) and *Universal Design* (Thompson, Johnstone, & Thurlow, 2002) guided the following steps in the item development process.

- Analyze the grade-level indicators and test blueprints.
- Analyze item specifications and style guides.
- Select qualified item writers.
- Develop item-writing workshop training materials.
- Train Nebraska educators to write items.
- Write items that match the standards, are free of bias, and address fairness and sensitivity concerns.
- Conduct and monitor internal item reviews and quality processes.
- Prepare passages and items for review by a committee of Nebraska educators (content and bias/sensitivity).
- Select and assemble items for field testing.
- Field test items, score the items, and analyze the data.
- Review items and associated statistics after field testing, including bias statistics.
- Update item bank.

Item Writer Training: The test items were written by Nebraska educators who were recommended for the process by an administrator. Three criteria were considered in selecting the item writers: educational role, geographic location, and experience with item writing.

Prior to developing items for NeSA, a cadre of item writers was trained with regard to:

- Nebraska content standards and test blueprints;
- cognitive levels, including depth of knowledge;
- principles of Universal Design;
- skill-specific and balanced test items for the grade level;
- developmentally appropriate structure and content;
- item-writing technical quality issues;
- bias, fairness, and sensitivity issues; and
- style considerations and item specifications.

Item Writing: To ensure that all test items met the requirements of the approved target content test blueprint and were adequately distributed across subcategories and levels of difficulty, item writers were asked to document the following specific information as each item was written.

- Alignment to the Nebraska Standards: There must be a high degree of match between a particular question and the standard it is intended to measure. Item writers were asked to clearly indicate which standard each item was measuring.

- Estimated Difficulty Level: Prior to field testing items, the item difficulties were not known, and writers could only make approximations as to how difficult an item might be. The estimated difficulty level was based upon the writer's own judgment as directly related to his or her classroom teaching and knowledge of the curriculum for a given subject area and grade level. The purpose for indicating estimated difficulty levels as items were written was to help ensure that the pool of items would include a range of difficulty (easy, medium, and challenging).

- Appropriate Grade Level, Item Context, and Assumed Student Knowledge: Item writers were asked to consider the conceptual and cognitive level of each item. They were asked to review each item to determine whether or not the item was measuring something that was important and could be successfully taught and learned in the classroom.

- Multiple-Choice (MC) Item Options and Distractor Rationale: Writers were instructed to make sure that each item had only one clearly correct answer. Item writers submitted the answer key with the item. All distractors were plausible choices that represented common errors and misconceptions in student reasoning.

- Face Validity and Distribution of Items Based Upon Depth of Knowledge: Writers were asked to classify the depth of knowledge of each item, using a model based on Norman Webb's work on depth of knowledge (Webb, 2002). Items were classified as one of four depth of knowledge categories: recall, skill/concept, strategic thinking, and extended thinking.

- Readability: Writers were instructed to pay careful attention to the readability of each item to ensure that the focus was on the concepts; not on reading comprehension of the item. Resources writers used to verify the vocabulary level were the *EDL Core Vocabularies* (Taylor , Frackenpohl, White, Nieroroda, Browning, & Brisner, 1989) and the *Children's Writer's Word Book* (Mogilner, 1992). In addition, every test item was reviewed by grade-level experts. They reviewed each item from the perspective of the students they teach, and they determined the validity of the vocabulary used.

- Grammar and Structure for Item Stems and Item Options: All items were written to meet technical quality, including correct grammar, syntax, and usage in all items, as well as parallel construction and structure of text associated with each multiple-choice item.

Item Review: Throughout the item development process, independent panels of reading content experts reviewed the items. The following guidelines for reviewing assessment items were used during each review process.

A quality item should:

- have only one clear correct answer and contain answer choices that are reasonably parallel in length and structure;
- have a correctly assigned content code (item map);
- measure one main idea or problem;
- measure the objective or curriculum content standard it is designed to measure;

- be at the appropriate level of difficulty;
- be simple, direct, and free of ambiguity;
- make use of vocabulary and sentence structure that is appropriate to the grade level of the student being tested;
- be based on content that is accurate and current;
- when appropriate, contain stimulus material that are clear and concise and provide all information that is needed;
- when appropriate, contain graphics that are clearly labeled;
- contain answer choices that are plausible and reasonable in terms of the requirements of the question, as well as the students' level of knowledge;
- contain distractors that relate to the question and can be supported by a rationale;
- reflect current teaching and learning practices in the subject area; and
- be free of gender, ethnic, cultural, socioeconomic, and regional stereotyping bias.

Following each review process, the item writer group and the item review panel discussed suggestions for revisions related to each item. Items were revised only when both groups agreed on the proposed change.

Editorial Review of Items: After items were written and reviewed, Nebraska Department of Education test development specialists reviewed each item for item quality, making sure that the test items were in compliance with guidelines for clarity, style, accuracy, and appropriateness for Nebraska students. Additionally, DRC test development content experts worked collaboratively with NDE to review and revise the items prior to field testing to ensure highest level of quality possible.

Review of the Online Items: All items for online assessment were reviewed by the Nebraska Department of Education, Computerized Assessments and Learning (CAL), DRC's online partner, and DRC. In addition to DRC's standard review process to which all items are subjected, and to ensure comparability with paper and pencil versions, all items were reviewed for formatting and scrolling concerns.

Universally Designed Assessments: Universally designed assessments allow participation of the widest possible range of students and result in valid inferences about performance of all students who participate and are based on the premise that each child in school is a part of the population to be tested, and that testing results should not be affected by disability, gender, race, or English language ability (Thompson, Johnstone, & Thurlow, 2002). The Nebraska Department of Education and Data Recognition Corporation (DRC) are committed to the development of items and tests that are fair and valid for all students. At every stage of the item and test development process, procedures ensure that items and tests are designed and developed using the elements of universally designed assessments that were developed by the National Center on Educational Outcomes (NCEO).

Federal legislation addresses the need for universally designed assessments. The *No Child Left Behind Act* (Elementary and Secondary Education Act) requires that each state must "provide for the participation in [statewide] assessments of all students" [Section 1111(b)(3)(C)(ix)(l)]. Both Title 1 and IDEA regulations call for universally designed assessments that are accessible and valid for all

students including students with disabilities and students with limited English proficiency. NDE and DRC recognize that the benefits of universally designed assessments not only apply to these groups of students, but to all individuals with wide ranging characteristics.

The NDE test development team and Nebraska item writers have been fully trained in the elements of Universal Design as it relates to developing large scale statewide assessments. Additionally, NDE and DRC partner to ensure that all items meet the Universal Design requirements during the item review process.

After a review of research relevant to the assessment development process and the principles of Universal Design (Center for Universal Design, 1997), NCEO has produced seven elements of Universal Design as they apply to assessments (Thompson, Johnstone, & Thurlow, 2002).

Inclusive Assessment Population

When tests are first conceptualized, they need to be thought of in the context of who will be tested. If the test is designed for state, district, or school accountability purposes, the target population must include every student except those who will participate in accountability through an alternate assessment. NDE and DRC are fully aware of increased demands that statewide assessment systems must include and be accountable for ALL students.

Precisely Defined Constructs

An important function of well-designed assessments is that they actually measure what they are intended to measure. NDE item writers and DRC carefully examine what is to be tested and design items that offer the greatest opportunity for success within those constructs. Just as universally designed architecture removes physical, sensory, and cognitive barriers to all types of people in public and private structures, universally designed assessments must remove all non-construct-oriented cognitive, sensory, emotional, and physical barriers.

Accessible, Non-biased Items

NDE conducts both internal and external review of items and test specifications to ensure that they do not create barriers because of lack of sensitivity to disability, cultural, or other subgroups. Items and test specifications are developed by a team of individuals who understand the varied characteristics of items that might create difficulties for any group of students. Accessibility is incorporated as a primary dimension of test specifications, so that accessibility is woven into the fabric of the test rather than being added after the fact.

Amenable to Accommodations

Even though items on universally designed assessments will be accessible for most students, there will still be some students who continue to need accommodations. Thus, another essential element of any universally designed assessment is that it is compatible with accommodations and a variety of widely used adaptive equipment and assistive technology. NDE, DRC, and Computerized

Assessment and Learning (CAL), DRC's online testing partner, work to ensure that state guidelines on the use of accommodations are compatible with the assessment being developed.

Simple, Clear, and Intuitive Instructions and Procedures

Assessment instructions should be easy to understand, regardless of a student's experience, knowledge, language skills, or current concentration level. Directions and questions need to be in simple, clear, and understandable language. Knowledge questions that are posed within complex language certainly invalidate the test if students cannot understand how they are expected to respond to a question.

Maximum Readability and Comprehensibility

A variety of guidelines exist to ensure that text is maximally readable and comprehensible. These features go beyond what is measured by readabililty formulas. Readability and comprehensibility are affected by many characteristics, including student background, sentence difficulty, organization of text, and others. All of these features are considered as NDE develops the text of assessments.

Plain language is a concept now being highlighted in research on assessments. Plain language has been defined as language that is straightforward and concise. The following strategies for editing text to produce plain language are used during NDE's editing process.

- Reduce excessive length.
- Use common words.
- Avoid ambiguous words.
- Avoid irregularly spelled words.
- Avoid proper names.
- Avoid inconsistent naming and graphic conventions.
- Avoid unclear signals about how to direct attention.
- Mark all questions.
- Maximum Legibility.

Legibility is the physical appearance of text, the way that the shapes of letters and numbers enable people to read text easily. Bias results when tests contain physical features that interfere with a student's focus on or understanding of the constructs that test items are intended to assess. DRC works closely with NDE to develop a style guide that includes dimensions of style that are consistent with universal design.

Depth of Knowledge: Interpreting and assigning depth of knowledge levels to both objectives within standards and assessment items is an essential requirement of alignment analysis. Four levels of depth of knowledge are used for this analysis. The Nebraska State Accountability assessments include items written at levels 1, 2, and 3. Level 4 items are not included due to the test being comprised of only multiple-choice items.

Reading Level 1

Level 1 requires students to receive or recite facts or to use simple skills or abilities. Oral reading that does not include analysis of the text as well as basic comprehension of a text is included. Items require only a shallow understanding of text presented and often consist of verbatim recall from text or simple understanding of a single word or phrase. Some examples that represent but do not constitute all of Level 1 performance are:

- Support ideas by reference to details in the text.
- Use a dictionary to find the meaning of words.
- Identify figurative language in a reading passage.

Reading Level 2

Level 2 includes the engagement of some mental processing beyond recalling or reproducing a response; it requires both comprehension and subsequent processing of text or portions of text. Intersentence analysis of inference is required. Some important concepts are covered but not in a complex way. Standards and items at this level may include words such as summarize, interpret, infer, classify, organize, collect, display, compare, and determine whether fact or opinion. Literal main ideas are stressed. A Level 2 assessment item may require students to apply some of the skills and concepts that are covered in Level 1. Some examples that represent but do not constitute all of Level 2 performance are:

- Use context cues to identify the meaning of unfamiliar words.
- Predict a logical outcome based on information in a reading selection.
- Identify and summarize the major events in a narrative.

Reading Level 3

Deep knowledge becomes more of a focus at Level 3. Students are encouraged to go beyond the text; however, they are still required to show understanding of the ideas in the text. Students may be encouraged to explain, generalize, or connect ideas. Standards and items at Level 3 involve reasoning and planning. Students must be able to support their thinking. Items may involve abstract theme identification, inference across an entire passage, or students' application of prior knowledge. Items may also involve more superficial connections between texts. Some examples that represent but do not constitute all of Level 3 performance are:

- Determine the author's purpose and describe how it affects the interpretation of a reading selection.
- Summarize information from multiple sources to address a specific topic.
- Analyze and describe the characteristics of various types of literature.

Reading Level 4

Higher-order thinking is central and knowledge is deep at Level 4. The standard or assessment item at this level will probably be an extended activity, with extended time provided. The extended time

period is not a distinguishing factor if the required work is only repetitive and does not require applying significant conceptual understanding and higher-order thinking. Students take information from at least one passage and are asked to apply this information to a new task. They may also be asked to develop hypotheses and perform complex analyses of the connections among texts. Some examples that represent but do not constitute all of Level 4 performance are:

- Analyze and synthesize information from multiple sources.
- Examine and explain alternative perspectives across a variety of sources.
- Describe and illustrate how common themes are found across texts from different cultures.

Mathematics Level 1

Level 1 includes the recall of information such as a fact, definition, term, or a simple procedure, as well as performing a simple algorithm or applying a formula. That is, in mathematics, a one-step, well-defined, and straight algorithmic procedure should be included at this lowest level. Other key words that signify a Level 1 include "identify," "recall," "recognize," "use," and "measure." Verbs such as "describe" and "explain" could be classified at different levels depending on what is to be described and explained.

Mathematics Level 2

Level 2 includes the engagement of some mental processing beyond a habitual response. A Level 2 assessment item requires students to make some decisions as to how to approach the problem or activity, whereas Level 1 requires students to demonstrate a rote response, perform a well-known algorithm, follow a set procedure (like a recipe), or perform a clearly defined series of steps. Keywords that generally distinguish a Level 2 item include "classify," "organize," "estimate," "make observations," "collect and display data," and "compare data." These actions imply more than one step. For example, to compare data requires first identifying characteristics of the objects or phenomenon and then grouping or ordering the objects. Some action verbs, such as "explain," "describe," or "interpret" could be classified at different levels depending on the object of the action. For example, if an item required students to explain how light affects mass by indicating there is a relationship between light and heat, this is considered a Level 2. Interpreting information from a simple graph, requiring reading information from the graph, also is a Level 2. Interpreting information from a complex graph that requires some decisions on what features of the graph need to be considered and how information from the graph can be aggregated is a Level 3. Caution is warranted in interpreting Level 2 as only skills because some reviewers will interpret skills very narrowly, as primarily numerical skills, and such interpretation excludes from this level other skills such as visualization skills and probability skills, which may be more complex simply because they are less common. Other Level 2 activities include explaining the purpose and use of experimental procedures; carrying out experimental procedures; making observations and collecting data;

classifying, organizing, and comparing data; and organizing and displaying data in tables, graphs, and charts.

Mathematics Level 3

Level 3 requires reasoning, planning, using evidence, and a higher level of thinking than the previous two levels. In most instances, requiring students to explain their thinking is a Level 3. Activities that require students to make conjectures are also at this level. The cognitive demands at Level 3 are complex and abstract. The complexity does not result from the fact that there are multiple answers, a possibility for both Levels 1 and 2, but because the task requires more demanding reasoning. An activity, however, that has more than one possible answer and requires students to justify the response they give would most likely be a Level 3. Other Level 3 activities include drawing conclusions from observations, citing evidence and developing a logical argument for concepts, explaining phenomena in terms of concepts, and using concepts to solve problems.

Mathematics Level 4

Level 4 requires complex reasoning, planning, developing, and thinking most likely over an extended period of time. The extended time period is not a distinguishing factor if the required work is only repetitive and does not require applying significant conceptual understanding and higher-order thinking. For example, if a student has to take the water temperature from a river each day for a month and then construct a graph, this would be classified as a Level 2. However, if the student were to conduct a river study that requires taking into consideration a number of variables, this would be a Level 4. At Level 4, the cognitive demands of the task should be high and the work should be very complex. Students should be required to make several connections—relate ideas *within* the content area or *among* content areas—and have to select one approach among many alternatives on how the situation should be solved, in order to be at this highest level. Level 4 activities include designing and conducting experiments, making connections between a finding and related concepts and phenomena, combining and synthesizing ideas into new concepts, and critiquing experimental designs.

Science Level 1

Level 1 (Recall and Reproduction) requires the recall of information, such as a fact, definition, term, or a simple procedure, as well as performance of a simple science process or procedure. Level 1 only requires students to demonstrate a rote response, use a well-known formula, follow a set procedure (like a recipe), or perform a clearly defined series of steps. A “simple” procedure is well defined and typically involves only one step. Verbs such as “identify,” “recall,” “recognize,” “use,” “calculate,” and “measure” generally represent cognitive work at the recall and reproduction level. Simple word problems that can be directly translated into and solved by a formula are considered Level 1. Verbs such as “describe” and “explain” could be classified at different DOK levels, depending on the complexity of what is to be described and explained.

A student answering a Level 1 item either knows the answer or does not: that is, the item does not need to be "figured out" or "solved." In other words, if the knowledge necessary to answer an item automatically provides the answer to it, then the item is at Level 1. If the knowledge needed to answer the item is not automatically provided in the stem, the item is at least at Level 2. Some examples that represent, but do not constitute all of, Level 1 performance are:

- Recall or recognize a fact, term, or property.
- Represent in words or diagrams a scientific concept or relationship.
- Provide or recognize a standard scientific representation for simple phenomenon.
- Perform a routine procedure, such as measuring length.

Science Level 2

Level 2 (Skills and Concepts) includes the engagement of some mental processing beyond recalling or reproducing a response. The content knowledge or process involved is **more complex** than in Level 1. Items require students to make some decisions as to how to approach the question or problem. Keywords that generally distinguish a Level 2 item include "classify," "organize," "estimate," "make observations," "collect and display data," and "compare data." These actions imply **more than one step**. For example, to compare data requires first identifying characteristics of the objects or phenomena and then grouping or ordering the objects. Level 2 activities include making observations and collecting data; classifying, organizing, and comparing data; and organizing and displaying data in tables, graphs, and charts. Some action verbs, such as "explain," "describe," or "interpret," could be classified at different DOK levels, depending on the complexity of the action. For example, interpreting information from a simple graph, requiring reading information from the graph, is a Level 2. An item that requires interpretation from a complex graph, such as making decisions regarding features of the graph that need to be considered and how information from the graph can be aggregated, is at Level 3. Some examples that represent, but do not constitute all of, Level 2 performance, are:

- Specify and explain the relationship between facts, terms, properties, or variables.
- Describe and explain examples and non-examples of science concepts.
- Select a procedure according to specified criteria and perform it.
- Formulate a routine problem, given data and conditions.
- Organize, represent, and interpret data.

Science Level 3

Level 3 (Strategic Thinking) requires reasoning, planning, using evidence, and a higher level of thinking than the previous two levels. The cognitive demands at Level 3 are complex and abstract. The complexity does not result only from the fact that there could be multiple answers, a possibility for both Levels 1 and 2, but because the multi-step task requires more demanding

reasoning. In most instances, requiring students to explain their thinking is at Level 3; requiring a very simple explanation or a word or two should be at Level 2. An activity that has more than one possible answer and requires students to justify the response they give would most likely be a Level 3. Experimental designs in Level 3 typically involve more than one dependent variable. Other Level 3 activities include drawing conclusions from observations; citing evidence and developing a logical argument for concepts; explaining phenomena in terms of concepts; and using concepts to solve non-routine problems. Some examples that represent, but do not constitute all of Level 3 performance, are:

- Identify research questions and design investigations for a scientific problem.
- Solve non-routine problems.
- Develop a scientific model for a complex situation.
- Form conclusions from experimental data.

Science Level 4

Level 4 (Extended Thinking) involves high cognitive demands and complexity. Students are required to make several connections—relate ideas within the content area or among content areas—and have to select or devise one approach among many alternatives to solve the problem. Many on-demand assessment instruments will not include any assessment activities that could be classified as Level 4. However, standards, goals, and objectives can be stated in such a way as to expect students to perform extended thinking. “Develop generalizations of the results obtained and the strategies used and apply them to new problem situations,” is an example of a grade 8 objective that is a Level 4. Many, but not all, performance assessments and open-ended assessment activities requiring significant thought will be Level 4.

Level 4 requires complex reasoning, experimental design and planning, and probably will require an extended period of time either for the science investigation required by an objective, or for carrying out the multiple steps of an assessment item. However, the extended time period is not a distinguishing factor if the required work is only repetitive and does not require applying significant conceptual understanding and higher-order thinking. For example, if a student has to take the water temperature from a river each day for a month and then construct a graph, this would be classified as a Level 2 activity. However, if the student conducts a river study that requires taking into consideration a number of variables, this would be a Level 4. Some examples that represent, but do not constitute all of, a Level 4 performance are:

- Based on data provided from a complex experiment that is novel to the student, deduce the fundamental relationship between a controlled variable and an experimental variable.
- Conduct an investigation, from specifying a problem to designing and carrying out an experiment, to analyzing its data and forming conclusions.

Source of Challenge Criterion

Source of Challenge criterion is only used to identify items where the major cognitive demand is inadvertently placed and is other than the targeted skill, concept, or application. Cultural bias or specialized knowledge could be reasons for an item to have a source of challenge problem. Such items' characteristics may cause some students to not answer an assessment item or answer an assessment item incorrectly or at a lower level even though they have the understanding and skills being assessed.

Item Content Review: Prior to field testing, all newly developed test passages/items were submitted to grade-level content committees for review. The content committees consisted of Nebraska educators from school districts throughout the state. The primary responsibility of the content committees was to evaluate items with regard to quality and content classification, including grade-level appropriateness, estimated difficulty, depth of knowledge, and source of challenge. They also suggested revisions, if appropriate. The committees also reviewed the items for adherence to the principles of universal design, including language demand and issues of bias, fairness, and sensitivity.

Item review committee members were selected by the Nebraska Department of Education. NDE test development team members facilitated the process. Training was provided by NDE and included how to review items for technical quality and content quality, including depth of knowledge and adherence to principles of universal design. In addition, training included providing committee members with the procedures for item review.

Committee members reviewed the items for quality and content, as well as for the following categories.

- Indicator (standard) Alignment
- Difficulty Level (classified as Low, Medium, or High)
- Depth of Knowledge (classified as Recall, Application, or Strategic Thinking)
- Correct Answer
- Quality of Graphics
- Appropriate Language Demand
- Freedom from Bias (classified as Yes or No)

Committee members were asked to flag items that needed revision and to denote suggested revisions on the flagged item cards.

Security was addressed by adhering to a strict set of procedures. Items in binders did not leave the meeting rooms and were accounted for at the end of each day before attendees were dismissed. All attendees, with the exception of NDE staff, were required to sign a Confidentiality Agreement (Appendix E).

Sensitivity and Bias Review: Prior to field testing items, all newly developed test items were submitted to a Bias and Sensitivity Committee for review. The committee's primary responsibility was to evaluate passages and items as to acceptability with regard to bias and sensitivity issues. They also

made recommendations for changes or deletion of items in order to remove the area of concern. The bias/sensitivity committee was composed of Nebraska educators who represented the diversity of students. All committee members were trained by a Nebraska Department of Education test development lead to review items for bias and sensitivity issues using *Fairness in Testing* training manual developed by Data Recognition Corporation (Appendix F).

All passages/items were read by all of the respective committee members. Each member noted bias and/or sensitivity comments on a review form. All comments were then compiled and the actions taken on these items were recorded by NDE. Committee members were required to sign a Confidentiality Agreement and strict security measures were in place to ensure that secure materials remained guarded (Appendix E).

2.6 Item Banking

DRC maintains an item bank (IDEAS) that provides a repository of item image, history, statistics, and usage. IDEAS includes a record of all newly created items together with item data from each item field test. It also includes all data from the operational administration of the items. Within IDEAS, DRC

- updates the Nebraska item bank after each administration;
- updates the Nebraska item bank with newly developed items;
- monitors the Nebraska item bank to ensure an appropriate balance of items aligned with content standards, goals, and objectives;
- monitors item history statistics; and
- monitors the Nebraska item bank for an appropriate balance of Depth of Knowledge (DOK) levels.

2.7The Operational Form Construction Process

The Spring 2012 operational forms were constructed in Lincoln, Nebraska in August 2011 (Reading), in September 2011 (Mathematics), and October 2011 (Science). The forms were constructed by NDE representatives and DRC content specialists. Training was provided by DRC for the forms construction process.

Prior to the construction of the operational forms, DRC Test Development content specialists reviewed the test blueprints to ensure that there was alignment between the items and the indicators, including the number of items per standard for each content-area test.

DRC Psychometricians provided Test Development specialists with an overview of the psychometric guidelines and targets for operational forms construction. The foremost guideline was for item content to match the test blueprint (Table of Specifications) for the given content. The point-biserial correlation guideline was to be greater than 0.3 (with a requirement for no point-biserial correlation less than zero). In addition, the average target p-value for each test was to be about 0.65. A Differential Item Functioning (DIF) code of C was to be avoided (unless no other items were available to fulfill a

blueprint requirement). The overall summary of the actual approved p-value and biserial of the forms is provided in the summary table later in this document.

DRC Test Development specialists printed a copy of each item card, with accompanying item characteristics, image, and psychometric data. Test Development specialists verified the accuracy of each item card, making sure that the item image has its correct item characteristics. Test Development specialists carefully reviewed each item card's psychometric data to ensure it is complete and reasonable. For Reading, the item cards (items and passages) were compiled in binders and sorted by p-values from highest to lowest by passage with associated items. For Mathematics, the item cards were compiled in binders and sorted by p-values from highest to lowest by standard and indicator.

NDE and DRC also checked to see that each item met technical quality for well-crafted items, including:

- only one correct answer,
- wording that is clear and concise,
- grammatical correctness,
- appropriate item complexity and cognitive demand,
    - appropriate range of difficulty,
    - appropriate depth-of-knowledge alignment,
- aligned with principles of Universal Design, and
- free of any content that might be offensive, inappropriate, or biased (content bias).

NDE representatives and DRC Test Development specialists made initial grade-level selections of the items (passages and items for Reading), known as the "pull list," to be included on the 2012 operational forms. The goal was for the first pull of the items to meet the Table of Specification (TOS) guidelines and psychometric guidelines specific to each content. As items were selected, the unique item codes were entered into a form building template which contained the item pool with statistics and item characteristics. The template automatically calculated the P-value, biserial, number of items per indicator and standard, number of items per DOK level (1, 2, or 3), and distribution of answer key as items were selected for each grade. As items were selected, the item characteristics (key, DOK, and alignment to indicator) were verified.

Differential Item Functioning in Operational Form Construction: Differential Item Functioning (DIF) is present when the likelihood of success on an item is influenced by group membership. A pattern of such results may suggest the presence of, but does not prove, *item bias*. Actual item bias may present negative group stereotypes, may use language that is more familiar to one subpopulation than to another, or may present information in a format that disadvantages certain learning styles. While the source of item bias is often clear to trained judges, many instances of DIF may have no identifiable cause (resulting in false positives). As such, DIF is not used as a substitute for rigorous, hands-on reviews by content and bias specialists. Instead, DIF helps to organize the review of the instances in

which bias is suggested. No items are automatically rejected simply because a statistical method flagged them or automatically accepted because they were not flagged.

During the operational form-pull process, the DIF code for every item proposed for use in the operational (core) is examined. To the greatest extent possible, the blueprint is met through the use of items with statistical DIF codes of A. Although DIF codes of B and C are not desirable and are deliberately avoided, the combination of the require blueprint and the depth of the available operational-ready item pool occasionally requires that items with B and C DIF are considered for operational use. In addition, for passage-based tests like reading (in which each item available in the item pool is linked to a set of passage-based items), the ability to use a minimum number of items associated with a passage may require the use of an item with a B or C DIF code. In any case, prior to allowing exceptions of this nature, every attempt is made to re-craft the core to avoid the use of the item with B or C DIF. Before allowing any exception to be made, the item in question is examined to determine whether the suggested bias is identifiable. If the suggested bias is determined to be valid, the item is not used.

Review of the Items and Test Forms: At every stage of the test development process the match of the item to the content standard was reviewed and verified since establishing content validity is one of the most important aspects in the legal defensibility of a test. As a result, it is essential that an item selected for a form link directly to the content curriculum standard and performance standard to which it is measuring. Test development specialists verified all items against their classification codes and item maps, both to evaluate the correctness of the classification and to ensure that the given task measures what it purports to measure.

2.8 Reading Assessment

Test Design: The NeSA-Reading operational test includes operational passages with associated items and one field test passage with associated items. This test was administered online via the test engine developed and managed by CAL, DRC's online testing partner. One form of the test was also published in a printed test booklet for schools that did not have students participating in the online system. Depending on grade, the forms contained 45 to 50 operational items.

Table 2.8.1 Reading 2012 Operational Test

Grade	Total No. of MC Core Items	No. of Embedded FT Items per Form (1 passage)	Total Items per Form	Total No. of Equivalent FT Forms	Total Core Points	Total No. of MC Items Added to the Bank
3	45	10	55	5	45	50
4	45	10	55	5	45	50
5	48	10	58	5	48	50
6	48	10	58	5	48	50
7	48	10	58	5	48	50
8	50	10	60	5	50	50
11	50	10	60	5	50	50

Psychometric Targets: The goal for the operational forms was to meet a mean *p-value* of approximately 0.65 with values restricted to the range of 0.30 to 0.90 and point-biserial correlations greater than 0.25, based on previous field test results. However, these targets are secondary to constructing the best test possible. Some compromises were allowed when necessary to best meet the objective of the assessment, to conform to the test specifications, and to operate within the limitations of the item bank.

Equating Design: Spring 2012 was the third operational administration of NeSA-R. Approximately 70% of the assessment was constructed from passages and related items field tested in Spring 2011. The approximate remaining 30% of the assessment was constructed from an overlap of items and passages from the 2010 and 2011 operational (core) item positions from the Spring 2010 and 2011 operational forms.

In addition to the operational passage sets, each student received one randomly selected field test passage with items. The passages and items taken by each student were administered in two testing sessions each intended to be administered in a single class period. The operational passages were administered to the student in a random order, but the field test passage was maintained in a fixed position. Items within a passage were administered in a fixed order for the passage. Equating was accomplished by anchoring on the operational passage items and calibrating the field test items concurrently.

2.9 Mathematics Assessment

Test Design: The NeSA-Mathematics operational test includes operational and field test items. This test was administered online via the test engine developed and managed by CAL. One form of the test

was also published in a printed test booklet for schools that did not have students participating in the online system. Depending on grade, the forms contained 50 to 60 operational items.

Table 2.9.1 Mathematics 2012 Operational Test

Grade	Total No. of MC Core Items	No. of Embedded FT Items per Form	Total Items per Form	Total No. of Equivalent FT Forms	Total Core Points	Total No. of MC Items Added to the Bank
3	50	10	60	5	50	50
4	55	10	65	5	55	50
5	55	10	65	5	55	50
6	58	10	68	5	58	50
7	58	10	68	5	58	50
8	60	10	70	5	60	50
11	60	10	70	5	60	50

Psychometric Targets: The goal for the operational forms was to meet a mean *p-value* of approximately 0.65 with values restricted to the range of 0.3 to 0.9 and point-biserial correlations greater than 0.25, based on previous field test results. However, these targets are secondary to constructing the best test possible. Some compromises were allowed when necessary to best meet the objective of the assessment, to conform to the test specifications, and to operate within the limitations of the item bank.

Equating Design: Spring 2012 was the second operational administration of NeSA-M. Approximately 70% of the assessment was constructed from items field tested in Spring 2010 and 2011. The approximate remaining 30% of the assessment was constructed from an overlap of items from the 2011 operational (core) item positions from the 2011 operational forms.

In addition to the operational items, each student received 10 randomly selected field test items. The items taken by each student were administered in two testing sessions each intended to be administered in a single class period. The operational items were administered to the student in a random order, but the field test items were maintained in fixed positions. Equating was accomplished by anchoring on the operational items and calibrating the field test items concurrently.

2.10 Science Assessment

Test Design: The NeSA-Science operational test includes operational and field test items. This test was administered online via the test engine developed and managed by CAL. One form of the test was also

published in a printed test booklet for schools that did not have students participating in the online system. Depending on grade, the forms contained 50 to 60 operational items.

Table 2.10.1 Science 2012 Operational Test

Grade	No. Operational Items	No. of Embedded FT Items per Form	Total Items	Total No. of FT Forms	Total No. of Items Field Tested
5	50	10	60	5	50
8	60	10	70	5	50
11	60	10	70	5	50

Psychometric Targets: The goal for the operational forms was to meet a mean *p-value* of approximately 0.65 with values restricted to the range of 0.3 to 0.9 and point-biserial correlations greater than 0.25, based on previous field test results. However, these targets are secondary to constructing the best test possible. Some compromises were allowed when necessary to best meet the objective of the assessment, to conform to the test specifications, and to operate within the limitations of the item bank.

Equating Design: Spring 2012 was the first operational administration of NeSA-S. The assessment was constructed from items field tested in Spring 2011. While preliminary item parameter estimates were available from the field test, the operational data were used for the final estimates.

In addition to the operational items, each student received 10 randomly selected field test items. The items taken by each student were administered in two testing sessions each intended to be administered in a single class period. The operational items were administered to the student in a random order, but the field test items were maintained in fixed positions. Equating was accomplished by anchoring on the operational items and calibrating the field test items concurrently.

3. Reading, Mathematics, and Science Operational Assessments

3.1 Student Demographics and Accommodations

Tables 3.1.1 – 3.1.7 represent demographic information as well as information on accommodations provided for the NeSA assessments.

Table 3.1.1 Grade 3 NeSA Summary data: Demographics and Accommodations

Grade 3		Reading		Mathematics	
		Count	%	Count	%
All Students		22157	100	22214	100
Gender	Female	10738	48.5	10767	48.5
	Male	11419	51.5	11447	51.5
Race/Ethnicity	American Indian/Alaska Native	326	1.5	325	1.5
	Asian	491	2.2	510	2.3
	Black	1454	6.6	1454	6.5
	Hispanic	3839	17.3	3867	17.4
	Native Hawaiian or other Pacific Islander	18	.1	18	0.1
	White	15303	69.1	15311	68.9
	Two or More Races	726	3.3	729	3.3
Food Program	Yes	10086	45.5	10105	45.5
	No	11581	52.3	11585	52.2
LEP/ELL	Yes	1927	8.7	1972	8.9
	No	20230	91.3	20242	91.1
Special Education	Yes	3199	14.4	3204	14.4
	No	18958	85.6	19010	85.6
Accommo-dations	Content Presentation	790	3.6	911	4.1
	Response	459	2.1	523	2.4
	Timing/Schedule/Setting	906	4.1	1007	4.5
	Direct Linguistic Support with Test Directions	511	2.3	601	2.7
	Direct Linguistic Support with Content and Test items	613	2.8	728	3.3

Grade 3		Reading		Mathematics	
		Count	%	Count	%
	Indirect Linguistic Support	485	2.2	539	2.4
	Spanish	16	.1	36	0.2
	Braille*	3	0.0	2	0.0
	Large Print*	21	.00	22	0.0

*Count represents the number of booklets ordered. This is not tracked.

Table 3.1.2 Grade 4 NeSA Summary data: Demographics and Accommodations

Grade 4		Reading		Mathematics	
		Count	%	Count	%
All Students		21975	100	22031	100
Gender	Female	10851	49.4	10872	49.3
	Male	11124	50.6	11159	50.7
Race/Ethnicity	American Indian/Alaska Native	310	1.4	311	1.4
	Asian	432	2.0	450	2.0
	Black	1383	6.3	1393	6.3
	Hispanic	3867	17.6	3896	17.7
	Native Hawaiian or other Pacific Islander	26	.1	27	.1
	White	15255	69.4	15252	69.2
	Two or More Races	702	3.2	702	3.2
Food Program	Yes	9984	45.4	10012	45.4
	No	11501	52.3	11504	52.2
LEP/ELL	Yes	1833	8.3	1894	8.6
	No	20142	91.7	20137	91.4
Special Education	Yes	3441	15.7	3440	15.6
	No	18534	84.3	18591	84.4
Accommo-dations	Content Presentation	966	4.4	1072	4.9
	Response	554	2.5	696	3.2
	Timing/Schedule/Setting	1075	4.9	1183	5.4

Grade 4		Reading		Mathematics	
		Count	%	Count	%
	Direct Linguistic Support with Test Directions	494	2.2	585	2.7
	Direct Linguistic Support with Content and Test items	586	2.7	698	3.2
	Indirect Linguistic Support	513	2.3	575	2.6
	Spanish	40	.2	52	.2
	Braille*	7	0.0	5	0.0
	Large Print*	23	0.0	23	0.0

*Count represents the number of booklets ordered. This is not tracked.

Table 3.1.3 Grade 5 NeSA Summary data: Demographics and Accommodations

Grade 5		Reading		Mathematics		Science	
		Count	%	Count	%	Count	%
All Students		21635	100	21687	100	21686	100
Gender	Female	10620	49.1	10640	49.1	10639	49.1
	Male	11015	50.9	11047	50.9	11047	50.9
Race/Ethnicity	American Indian/Alaska Native	344	1.6	346	1.6	345	1.6
	Asian	451	2.1	473	2.2	471	2.2
	Black	1451	6.7	1452	6.7	1449	6.7
	Hispanic	3635	16.8	3659	16.9	3658	16.9
	Native Hawaiian or other Pacific Islander	27	.1	27	.1	27	0.1
	White	15096	69.8	15095	69.6	15101	69.6
	Two or More Races	631	2.9	635	2.9	635	2.9
Food Program	Yes	9703	44.8	9726	44.8	9752	45.0
	No	11496	53.1	11498	2.1	11510	53.1
LEP/ELL	Yes	1442	6.7	1494	6.9	1497	6.9
	No	20193	93.3	20193	93.1	20189	93.1
Special Education	Yes	3267	15.1	3271	15.1	3275	15.1
	No	18368	84.9	18416	84.9	18411	84.9

Grade 5		Reading		Mathematics		Science	
		Count	%	Count	%	Count	%
Accommo-dations	Content Presentation	846	3.9	1010	4.7	778	3.6
	Response	450	2.1	615	2.8	439	2.0
	Timing/Schedule/Setting	981	4.5	1123	5.2	865	4.0
	Direct Linguistic Support with Test Directions	307	1.4	379	1.7	316	1.5
	Direct Linguistic Support with Content and Test items	359	1.7	444	2.0	352	1.6
	Indirect Linguistic Support	277	1.3	319	1.5	266	1.2
	Spanish	20	.1	44	.2	30	.1
	Braille*	1	0.0	1	0.0	1	0.0
	Large Print*	23	0.0	24	0.0	22	0.0

*Count represents the number of booklets ordered. This is not tracked.

Table 3.1.4 Grade 6 NeSA Summary data: Demographics and Accommodations

Grade 6		Reading		Mathematics	
		Count	%	Count	%
All Students		21391	100	21430	100
Gender	Female	10440	48.8	10456	48.8
	Male	10951	51.2	10974	51.2
Race/Ethnicity	American Indian/Alaska Native	304	1.4	303	1.4
	Asian	400	1.9	418	2.0
	Black	1435	6.7	1436	6.7
	Hispanic	3535	16.5	3560	16.6
	Native Hawaiian or other Pacific Islander	23	.1	23	.1
	White	15039	70.3	15033	70.1
	Two or More Races	655	3.1	657	3.1
Food Program	Yes	9443	44.1	9465	44.2
	No	11560	54.o	11554	53.9
LEP/ELL	Yes	1032	4.8	1082	5.0

Grade 6		Reading		Mathematics	
		Count	%	Count	%
	No	20359	95.2	20348	95.0
Special Education	Yes	3065	14.3	3061	14.3
	No	18326	85.7	18369	85.7
Accommo-dations	Content Presentation	851	4.0	918	4.3
	Response	389	1.8	645	3.0
	Timing/Schedule/Setting	924	4.3	1007	4.7
	Direct Linguistic Support with Test Directions	196	.9	255	1.2
	Direct Linguistic Support with Content and Test items	208	1.0	264	1.2
	Indirect Linguistic Support	177	.8	218	1.0
	Spanish	18	.1	35	.2
	Braille*	4	0.0	3	0.0
	Large Print*	16	0.0	16	0.0

*Count represents the number of booklets ordered. This is not tracked.

Table 3.1.5 Grade 7 NeSA Summary data: Demographics and Accommodations

Grade 7		Reading		Mathematics	
		Count	%	Count	%
All Students		20977	100	20995	100
Gender	Female	10239	48.8	10238	48.8
	Male	10738	51.2	10757	51.2
Race/Ethnicity	American Indian/Alaska Native	315	1.5	311	1.5
	Asian	434	2.1	444	2.1
	Black	1301	6.2	1306	6.2
	Hispanic	3340	15.9	3363	16.0
	Native Hawaiian or other Pacific Islander	27	.1	27	.1
	White	14921	71.1	14906	71.0
	Two or More Races	639	3.0	638	3.0
Food Program	Yes	9021	43.0	9038	43.0

Grade 7		Reading		Mathematics	
		Count	%	Count	%
	No	11578	55.2	11571	55.1
LEP/ELL	Yes	759	3.6	800	3.8
	No	20218	3.6	20195	96.2
Special Education	Yes	2806	13.4	2799	13.3
	No	18171	86.6	18196	86.7
Accommo-dations	Content Presentation	606	2.9	661	3.1
	Response	265	1.3	560	2.7
	Timing/Schedule/Setting	712	3.4	756	3.6
	Direct Linguistic Support with Test Directions	112	.5	114	.5
	Direct Linguistic Support with Content and Test items	88	.4	111	.5
	Indirect Linguistic Support	100	.5	59	.3
	Spanish	17	.1	29	.1
	Braille*	6	0	5	0
	Large Print*	17	.001	19	.001

*Count represents the number of booklets ordered. This is not tracked.

Table 3.1.6 Grade 8 NeSA Summary data: Demographics and Accommodations

Grade 8		Reading		Mathematics		Science	
		Count	%	Count	%	Count	%
All Students		20768	100	20800	100	20808	100
Gender	Female	10051	48.4	10066	48.4	10071	48.4
	Male	10717	51.6	10734	51.6	10737	51.6
Race/Ethnicity	American Indian/Alaska Native	267	1.3	265	1.3	269	1.3
	Asian	382	1.8	392	1.9	392	1.9
	Black	1316	6.3	1315	6.3	1317	6.3
	Hispanic	3182	15.3	3215	15.5	3211	15.4
	Native Hawaiian or other Pacific Islander	28	.1	28	.1	28	.1

Grade 8		Reading		Mathematics		Science	
		Count	%	Count	%	Count	%
	White	15029	72.4	15024	72.2	15030	72.2
	Two or More Races	564	2.7	561	2.7	561	2.7
Food Program	Yes	8695	41.9	8710	41.9	8728	41.9
	No	11724	56.5	11723	56.4	11734	56.4
LEP/ELL	Yes	606	2.9	651	3.1	651	3.1
	No	20162	97.1	20149	96.9	20157	96.9
Special Education	Yes	2751	13.2	2747	13.2	2751	13.2
	No	18017	86.8	18053	86.8	18057	86.8
Accommo-dations	Content Presentation	505	2.4	542	2.6	451	2.2
	Response	231	1.1	515	2.5	140	.7
	Timing/Schedule/Setting	551	2.7	604	2.9	448	2.2
	Direct Linguistic Support with Test Directions	121	.6	124	.6	112	.5
	Direct Linguistic Support with Content and Test items	95	.5	110	.5	99	.5
	Indirect Linguistic Support	91	.4	81	.4	83	.4
	Spanish	24	.1	45	.2	47	.2
	Braille*	4	0	4	0	4	0
	Large Print*	17	.001	16	.001	16	.001

*Count represents the number of booklets ordered. This is not tracked.

Table 3.1.7 Grade 11 NeSA Summary data: Demographics and Accommodations

Grade 11		Reading		Mathematics		Science	
		Count	%	Count	%	Count	%
All Students		20868	100	20838	100	20830	100
Gender	Female	10185	48.8	10169	48.8	10163	48.8
	Male	10683	51.2	10669	51.2	10667	51.2
Race/Ethnicity	American Indian/Alaska Native	237	1.1	237	1.1	239	1.1
	Asian	440	2.1	440	2.1	438	2.1
	Black	1317	6.3	1316	6.3	1310	6.3

Grade 11		Reading		Mathematics		Science	
		Count	%	Count	%	Count	%
	Hispanic	2826	13.5	2832	13.6	2830	13.6
	Native Hawaiian or other Pacific Islander	17	.1	18	.1	18	.1
	White	15473	74.1	15446	74.1	15439	74.1
	Two or More Races	558	2.7	549	2.6	556	2.7
Food Program	Yes	7430	35.6	7394	35.5	7411	35.6
	No	13085	62.7	13071	62.7	13062	62.7
LEP/ELL	Yes	506	2.4	517	2.5	514	2.5
	No	20362	97.6	20321	97.5	20316	97.5
Special Education	Yes	2256	10.8	2230	10.7	2241	10.8
	No	18612	89.2	18608	89.3	18589	89.2
Accommo-dations	Content Presentation	209	1.0	270	1.3	210	1.0
	Response	125	.6	274	1.3	171	.8
	Timing/Schedule/Setting	323	1.5	453	2.2	352	1.7
	Direct Linguistic Support with Test Directions	15	.1	76	.4	77	.4
	Direct Linguistic Support with Content and Test items	15	.1	85	.4	81	.4
	Indirect Linguistic Support	38	.2	109	.5	103	.5
	Spanish	21	.1	71	.3	72	.3
	Braille*	2	0	1	0	2	0
	Large Print*	14	.001	16	.001	14	.001

*Count represents the number of booklets ordered. This is not tracked.

3.2 Rasch Calibration and Equating

Calibration of NeSA was accomplished with *Winsteps version 3.74.00* (Linacre, 2012). This provided the final estimates of the item logit difficulties for the reading, mathematics, and science operational items. These estimates were the basis for the standard setting and scale definition to be used throughout the duration of the program. The first calibration run established the parameter estimates for the operational items without interference from the newly written field test items. Once the

difficulties for the operational items were obtained, they were used as *anchors* to evaluate and equate the field test items to the operational metric. This was accomplished by using the anchor difficulties to define the metric and obtain estimates for the unanchored (field test) items in that metric. The results are estimated difficulties relative to the anchors and are, hence, scaled to the existing metric. The final reading values can be viewed in Appendix S, the final mathematics values can be viewed in Appendix T, and the final science values can be viewed in Appendix U. For summary analysis and demographic breakdowns for reading, mathematics, and science, please see Appendix W.

An overview of Rasch Measurement Models is provided in Appendix G as well as in several of the references (see, for example, Wright & Stone, 1979).

3.3 Validity and Reliability

Items: For criterion-referenced, standards-based assessment, the strongest validity evidence is derived directly from the test construction process and the item scaling. The item development and test construction process, described above, ensures that every item aligns directly to one of the content standards. This alignment is foremost in the minds of the item writers and editors. As a routine part of item selection prior to an item appearing on a test form, the review committees check the alignment of the items with the standards and make any adjustments necessary. The result is consensus among the content specialists and teachers that the assessment does in fact assess what was intended.

The empirical item scaling, which indicates where each item falls on the logit ability-difficulty continuum, should be consistent with what theory suggests about the items. Items that require more knowledge, more advanced skills, and more complex behaviors should be empirically more difficult than those requiring less. Evidence of this agreement is contained in the item summary tables in Appendix S, T and U, as well as the success of the Bookmark and Contrasting Groups standard setting processes (in the separate *2010 NeSA-R Standard Setting Technical Report, 2011 NeSA-M Standard Setting Technical Report and 2012 NeSA-S Standard Setting Technical Report*). Panelists participating in the Bookmark process work from an item booklet in which items are ordered by their empirical difficulties. Discussions about placement of the bookmarks almost invariably focus on the knowledge, skills, and behaviors required of each item, and, overall, panelists were comfortable with the item ordering and spacing. Contrasting Groups participants, using their knowledge and experience with their students, placed their students in a corresponding Performance Level.

Items Analyses: Traditional item analysis is a straightforward approach to examining the quality of the items that is rooted in true score theory. Although these are sample-specific statistics, they are entirely adequate for assessing the effectiveness of items in this context. The statistics provide information about the quality of the items based on student responses in an operational setting. The following sections provide descriptions of the item summary statistics found in Appendices H, I and J.

Item Difficulty: (*p-value*) is the percent of examinees in the sample who answered the item correctly. Typically, test developers target *p-values* in the range of 0.30 to 0.90. Mathematically, information is maximized and standard errors minimized when the *p-value* equals 0.50. Experience suggests that multiple choice items are effective when the student is more likely to succeed than fail and it is important to include a range of difficulties matching the distribution of student abilities (Wright & Stone, 1979). Occasionally, items that fall outside the desired range can be justified for inclusion when the educational importance of the item content or the desire to measure students with very high or low achievement override the statistical considerations.

Table 3.3.1 Summary of Traditional Item Percent Correct for NeSA-R Operational Items

	Item Percent Correct										
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	<=0.7	<=0.8	<=0.9	>0.9	Total
3	0	0	0	0	2	10	10	12	11	0	45
4	0	0	0	1	0	12	14	14	4	0	45
5	0	0	0	1	5	7	13	12	10	0	48
6	0	0	0	3	4	5	8	17	10	1	48
7	0	0	0	2	3	10	10	13	8	2	48
8	0	0	0	1	4	10	15	8	10	2	50
11	0	0	1	1	5	13	8	12	10	0	50

Table 3.3.2 Summary of Traditional Item Percent Correct for NeSA-M Operational Items

	Item Percent Correct										
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	<=0.7	<=0.8	<=0.9	>0.9	Total
3	0	0	0	0	2	5	11	20	10	2	50
4	0	0	0	0	2	12	14	16	9	2	55
5	0	0	0	0	2	4	20	17	12	0	55
6	0	0	0	0	1	9	17	18	13	0	58
7	0	0	0	0	3	12	20	13	10	0	58
8	0	0	0	0	6	9	28	14	3	0	60
11	0	0	0	2	5	17	23	9	4	0	60

Table 3.3.3 Summary of Traditional Item Percent Correct for NeSA-S Operational Items

	Item Percent Correct										
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	<=0.7	<=0.8	<=0.9	>0.9	Total
5	0	0	0	1	4	10	14	13	6	2	50
8	0	0	0	2	9	7	16	16	9	1	60
11	0	0	0	2	7	17	16	14	4	0	60

Percent selecting each response option indicates the effectiveness of each distractor. In general, one expects the correct response to be the most attractive, although this need not hold for unusually challenging items. This statistic for the correct response option is identical to the *p*-value when considering multiple-choice items with a single correct response.

Item-total correlation describes the relationship between performance on the specific item and performance on the entire form. Total test score is the best available indicator of proficiency; success on individual items should correlate with success on the total test. For multiple-choice items, the statistic is the *point-biserial correlation*, which is a special case of the Pearson product moment correlation for the keyed correct response with total test score. Items with negative correlations are flagged and referred to Test Development as possible mis-keys. Mis-keyed items will be corrected and rescored prior to computing the final item statistics. Negative correlations can also indicate problems with the item content, structure, or students' opportunity to learn. Items with point-biserial values of less than 0.2 were flagged and referred to content specialists for review before being considered for use on future forms. As seen below, no items had negative point-biserial correlations.

Table 3.3.4 Summary of Point-biserial Correlations for NeSA-R

	Item Point-biserial Correlation							
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	>0.6	Total
3	0	1	2	16	21	5	0	45
4	0	0	3	25	17	0	0	45
5	0	0	2	16	29	1	0	48
6	0	0	2	21	20	5	0	48
7	0	0	5	12	26	5	0	48
8	0	0	4	19	25	2	0	50
11	0	0	2	11	25	12	0	50

Table 3.3.5 Summary of Point-biserial Correlations for NeSA-M

	Item Point-biserial Correlation							
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	>0.6	Total
3	0	0	3	11	23	12	1	50
4	0	0	0	13	30	11	1	55
5	0	0	3	17	25	10	0	55
6	0	0	3	11	26	18	0	58
7	0	0	0	11	26	20	1	58
8	0	0	1	13	32	13	1	60
11	0	0	2	10	29	19	0	60

Table 3.3.6 Summary of Point-biserial Correlations for NeSA-S

	Item Point-biserial Correlation							
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	>0.6	Total
5	0	0	8	15	24	3	0	50
8	0	1	6	25	27	1	0	60
11	0	1	2	20	26	11	0	60

Point-biserial correlations of response options describe the relationship between selecting a response option for a specific item and performance on the entire test. They can be interpreted as the standardized mean score of examinees selecting the response. The correlation between an incorrect answer and total test performance should be negative. The desired pattern is strong positive values for the correct option and strong negative values for the incorrect options. Any other pattern indicates a problem with the item or with the key. These patterns would imply a high ability way to answer incorrectly or a low ability way to answer correctly. Examples of these situations could be an item with an ambiguous or misleading distractor that was attractive to high-performing examinees or an item that depended on experience outside of instruction that was unrelated to ability.

This statistic for the correct option is identical to the item-total correlation for multiple-choice items.

Percent of students omitting an item is useful for identifying problems with testing time and test layout. If the omit percentage is large for a single item, it could indicate a problem with the layout or content of an item. For example, students tend to skip items with wordy stems or that otherwise appear difficult or time consuming. While there is no hard and fast rule for what *large* means, and it varies with groups and ages of students, five percent omits is often used as a preliminary screening value.

Detailed results of the item analyses for the NeSA-R operational items are presented in Appendix H. Detailed results of the item analyses for the NeSA-M operational items are presented in Appendix I. Detailed results of the item analyses for the NeSA-S operational items are presented in Appendix J. Based on these analyses, items were selected for review if the p-value was less than 0.25 and the *item-total correlation* was less than 0.2. Items were identified as probable mis-keys if the *p*-value for the correct response was less than one of the incorrect responses and the *item-total correlation* was negative.

Forms Performance Summary: The NeSA-R operational forms contained five passages for all grades and a total of 45 to 50 items, depending on the grade, as shown in Table 2.8.1. The passages were administered online in a random order with the items in a fixed order within each passage. The percent correct means and traditional form reliabilities for NeSA-R are shown in Table 3.3.7, 3.3.8 for NeSA-M and 3.3.9 for NeSA-S. More detail on the performance of the forms is given in Appendix N.

Table 3.3.7 2012 NeSA-R Form Summary

Grade	Mean Percent Correct	Person Separation Reliability
3	70.0	.85
4	66.2	.85
5	67.9	.86
6	68.8	.86
7	67.7	.87
8	67.4	.87
11	65.3	.89

Table 3.3.8 2012 NeSA-M Form Summary

Grade	Mean Percent Correct	Person Separation Reliability
3	71.4	.87
4	69.1	.89
5	71.3	.87
6	71.0	.88
7	67.4	.90
8	65.2	.90
11	62.4	.91

Table 3.3.9 2012 NeSA-M Form Summary

Grade	Mean Percent Correct	Person Separation Reliability
5	67.9	.86
8	66.2	.88
11	63.0	.90

Appendix W provides more detail on the performance of the content area assessments by subgroup. Mean percent correct are typical of the group historical performances. The Cronbach's alpha reliabilities were on the order of 0.90 for all groups, with none below 0.85 except for those with very small counts, which is often cited as the acceptable level for this type of data.

State Performance Summary: Complete frequency distributions for the NeSA-R, NeSA-M, and NeSA-S are provided in Appendices P, Q, and R as part of the raw-to-scale score conversion tables. A simple summary of the reading, mathematics, and science distributions can be found in Table 3.3.13, 3.3.14 and 3.3.15. While the distribution appears consistent across grades, there was no attempt at longitudinal equating beyond the articulation of the performance level definitions done in conjunction with standard setting. This is described briefly in Section 3.4 and in detail in the separate *2010 NeSA-R*

Standard Setting Technical Report, 2011 NeSA-M Standard Setting Technical Report and 2012 NeSA-S Standard Setting Technical Report.

Table 3.3.13 2012 NeSA-R State Scale Score Summary, All Students

		Scale Score		Quartile		
Grade	Count	Mean	S.D.	First	Second	Third
3	22157	108.7	30.9	87	109	129
4	21975	111.7	36.3	86	112	135
5	21635	114.3	41.5	86	115	140
6	21391	112.7	40.3	83	111	142
7	20977	116.1	40.5	89	117	142
8	20768	109.0	37.3	84	109	136
11	20868	102.2	44.9	71	102	136

Table 3.3.14 2012 NeSA-M State Scale Score Summary, All Students

		Scale Score		Quartile		
Grade	Count	Mean	S.D.	First	Second	Third
3	22214	107.9	36.6	82	108	134
4	22031	106.4	35.0	81	105	129
5	21687	108.5	34.4	83	107	133
6	21430	106.3	40.2	77	103	133
7	20995	104.0	39.0	76	102	128
8	20800	99.3	37.6	71	98	124
11	20838	95.9	44.8	60	91	127

Table 3.3.15 2012 NeSA-S State Scale Score Summary, All Students

		Scale Score		Quartile		
Grade	Count	Mean	S.D.	First	Second	Third
5	21686	101.0	33.8	78	100	123
8	20808	99.8	33.6	78	99	123
11	20830	99.2	29.3	78	98	118

For NeSA-R, between 8% and 17% of students took the assessment in the paper-based version with the lower percentages occurring in middle and high schools. Table 3.2.16 provides counts of the numbers tested in each mode and the percent testing with paper.

Table 3.3.16 2011 NeSA-R Number of Students Tested

Grade	Total	Online	Paper	Percent Paper
3	22157	18560	3597	16%
4	21975	18299	3676	17%
5	21635	18659	2976	14%
6	21391	18045	3346	16%
7	20977	18158	2819	13%
8	20768	17924	2844	14%
11	20868	19114	1754	8%

For NeSA-M between 31% and 38% of students took the assessment in the paper-based version. Table 3.3.17 provides counts of the numbers tested in each mode and the percent testing with paper.

Table 3.3.17 2011 NeSA-M Number of Students Tested

Grade	Total	Online	Paper	Percent Paper
3	22214	14747	7467	34%
4	22031	14691	7340	33%
5	21687	14550	7137	33%
6	21430	14059	7371	34%
7	20995	14556	6439	31%
8	20800	14388	6412	31%
11	20838	12983	7855	38%

For NeSA-S between 12% and 15% of students took the assessment in the paper version. Table 3.3.18 provides counts of the numbers tested in each mode and the percent testing with paper.

Table 3.3.18 2011 NeSA-S Number of Students Tested

Grade	Total	Online	Paper	Percent Paper
5	21686	18534	3152	15%
8	20808	18346	2462	12%
11	20830	18363	2467	12%

Decision Consistency: In a standards-based testing program, there is great interest in how accurately students are classified into achievement categories. Decision consistency answers the question: What is the agreement between the classifications based on two non-overlapping, equally difficult forms of the test (Huynh, 1976). If two equivalent forms were given to the same students, the consistency of

the measure would be reflected by the extent that the classification decisions made from the first set of test scores matched the decisions based on the second set of test scores. In contrast to Coefficient Alpha, which describes the relative ordering of students, it is the actual student scores that are important in decision consistency.

Table 3.3.19. Pseudo-Decision Table for Two Hypothetical Categories

		TEST ONE		
		LEVEL I	LEVEL II	MARGINAL
TEST TWO	LEVEL I	φ_{11}	φ_{12}	$\varphi_{1\bullet}$
	LEVEL II	φ_{21}	φ_{22}	$\varphi_{2\bullet}$
	MARGINAL	$\varphi_{\bullet 1}$	$\varphi_{\bullet 2}$	1

Table 3.3.20. Pseudo-Decision Table for Four Hypothetical Categories

		TEST ONE				
		LEVEL I	LEVEL II	LEVEL III	LEVEL IV	MARGINAL
TEST TWO	LEVEL I	φ_{11}	φ_{12}	φ_{13}	φ_{14}	$\varphi_{1\bullet}$
	LEVEL II	φ_{21}	φ_{22}	φ_{23}	φ_{24}	$\varphi_{2\bullet}$
	LEVEL III	φ_{31}	φ_{32}	φ_{33}	φ_{34}	$\varphi_{3\bullet}$
	LEVEL IV	φ_{41}	φ_{42}	φ_{43}	φ_{44}	$\varphi_{4\bullet}$
	MARGINAL	$\varphi_{\bullet 1}$	$\varphi_{\bullet 2}$	$\varphi_{\bullet 3}$	$\varphi_{\bullet 4}$	1

If a student is classified as being in one category based on Test One's score, how probable would it be that the student would be classified in the same category based on Test Two?

The proportions of correct decisions, φ for two and four categories are computed by the following two formulas, respectively:

$$\varphi = \varphi_{11} + \varphi_{22}$$

$$\varphi = \varphi_{11} + \varphi_{22} + \varphi_{33} + \varphi_{44.}$$

It is the proportion of students classified by the two forms into exactly the same achievement level that represents the overall consistency.

Since it is not possible to retest in order to estimate the proportion of students who would be reclassified in the same performance levels, a statistical model needs to be imposed on the data in order to project the consistency of classifications solely using data from the available administration (Hambleton & Novick, 1973). Although a number of procedures are available, two well-known methods were developed by Hanson and Brennan (1990) and Livingston and Lewis (1995) utilizing specific True Score Models.

Results and Observations

Several factors might affect decision consistency. One important factor is the reliability of the scores. All other things being equal, more reliable test scores tend to result in more similar reclassifications. Another factor is the location of the cutscore in the score distribution. More consistent classifications are observed when the cutscores are located away from the mass of the score distribution. The number of performance levels is also a consideration. Consistency indices for four performance levels should be lower than those based on three categories because classification using four levels would allow more opportunity to change achievement levels. Finally, some research has found that results from the Hanson and Brennan (1990) method on a dichotomized version of a complex assessment yields similar results to the Livingston and Lewis method (1995) and the method by Stearns and Smith (2007).

Across all grades, the overall decision consistencies were around 0.90, with only trivial differences between the algorithms. Consistency around the Exceeds the Standards cut score tended to be lower than around the Meets the Standards cutscore, reflecting the higher standard errors for the more extreme scores. The tables below provide the results for each grade and cutscore for both algorithms. The tables also distinguish between Decision Consistency and Decision Accuracy.

> Decision Consistency: *the degree of agreement between two classifications based on non-overlapping, equally difficult forms of the test.* This is the agreement between two independent, observable but imperfect classification decisions. It is analogous to test-retest reliability. It is an index of how consistent the classification would be if the student could be tested again without contamination from the first testing. Both classifications would involve measurement error.
>
> Decision Accuracy: *the degree of agreement between actual classification, based on the single-form score, with the classification that would be made on the basis of the true scores?* This is the agreement between the observed classification and the unobservable *true* classification. While the observed classification would involve measurement error, the *true* classification would not.

Table 3.3.21 NeSA-R Decision Consistency Results

Content Area	Grade	Livingston & Lewis				Hanson & Brennan			
		Decision Accuracy		Decision Consistency		Decision Accuracy		Decision Consistency	
		Meets	Exceeds	Meets	Exceeds	Meets	Exceeds	Meets	Exceeds
Reading	3	0.93	0.90	0.89	0.86	0.93	0.90	0.90	0.86
	4	0.92	0.90	0.88	0.86	0.92	0.90	0.89	0.86
	5	0.92	0.90	0.89	0.86	0.92	0.90	0.89	0.86
	6	0.92	0.90	0.89	0.86	0.92	0.90	0.89	0.86
	7	0.93	0.90	0.90	0.86	0.93	0.90	0.90	0.86
	8	0.92	0.90	0.89	0.86	0.92	0.90	0.89	0.86
	11	0.92	0.92	0.88	0.88	0.92	0.92	0.89	0.88

Table 3.3.22 NeSA-M Decision Consistency Results

Content Area	Grade	Livingston & Lewis				Hanson & Brennan			
		Decision Accuracy		Decision Consistency		Decision Accuracy		Decision Consistency	
		Meets	Exceeds	Meets	Exceeds	Meets	Exceeds	Meets	Exceeds
Math	3	0.93	0.91	0.91	0.87	0.93	0.91	0.91	0.88
	4	0.93	0.93	0.91	0.90	0.93	0.93	0.91	0.90
	5	0.93	0.91	0.91	0.88	0.94	0.92	0.91	0.88
	6	0.93	0.93	0.91	0.90	0.93	0.93	0.91	0.90
	7	0.94	0.94	0.91	0.91	0.94	0.94	0.91	0.91
	8	0.93	0.94	0.91	0.92	0.93	0.94	0.91	0.92
	11	0.93	0.94	0.91	0.92	0.93	0.94	0.91	0.92

Table 3.3.23 NeSA-S Decision Consistency Results

Content Area	Grade	Livingston & Lewis				Hanson & Brennan			
		Decision Accuracy		Decision Consistency		Decision Accuracy		Decision Consistency	
		Meets	Exceeds	Meets	Exceeds	Meets	Exceeds	Meets	Exceeds
Science	5	0.91	0.93	0.87	0.90	0.91	0.93	0.87	0.90
	8	0.92	0.93	0.88	0.90	0.92	0.93	0.88	0.90
	11	0.93	0.94	0.90	0.92	0.93	0.94	0.90	0.92

3.4 Setting Performance Standards

In spring and summer 2012 standard setting and contrasting groups events took place for NeSA Science. NeSA- Reading standard setting was completed in 2010 and NeSA-Mathematics standard setting was completed in 2011. Complete documentation of the 2012 science standard setting and standards validation events are presented in a separate document called *2012 NeSA-Science Standard Setting Technical Report*.

Academic Performance Levels for the science component of the Nebraska State Accountability assessments (NeSA-Science) were developed in spring 2012 by establishing cut scores that define operationally the three Performance Levels: *Below the Standards, Meets the Standards, Exceeds the Standards*. These Performance Level designations will be used by local, state, and federal accountability programs and are central to communicating to parents, teachers and the public. The *Meets the Standards* and *Exceeds the Standards* levels are used for the *No Child Left Behind (NCLB)* Adequate Yearly Progress (AYP) proficiency goal.

The larger process comprised four events. First, a meeting was held April 12, 2012, with the Nebraska State Board of Education and other stakeholders to introduce the process and obtain feedback to ensure an effective, defensible process. Second, a *Contrasting Groups* survey of science specialists and teachers was conducted in spring 2012 to obtain the teachers' overall perception of the proficiency level of their own students, independent of the state assessment. Third, a *Bookmark* Standard Setting was conducted June 26, 2012 in Lincoln, Nebraska, after the operational data were available. Finally, recommendations of the Contrasting Groups and Bookmark processes were presented to the State Board of Education July 10–11, 2012. The purpose of this meeting was for the State Board of Education to formally establish the Performance Levels. This report specifically documents the Bookmark and Contrasting Groups portions of the process.

The Bookmark method (Lewis, Mitzel, & Green, 1996) is, perhaps, the most philosophically consistent with criterion-referenced, standards-based[1] assessments like the NeSA. Bookmark is an *item-based* method. It requires panelists to determine which items can be successfully answered 67% of the time by students at the Performance Level boundaries. The Contrasting Groups method (Cizek & Bunch, 2007, chapter 8) is *student-based* which asks teachers to place students into one of the three Performance Levels based on their knowledge of the students from their classrooms without considering the assessment. The success of either approach requires an in-depth understanding of the skills and knowledge required at each level. This shared understanding is expressed in *Performance Level Descriptors* (Appendix O).

To assist the State Board of Education in determining appropriate cut scores, DRC presented the results of both studies: the Bookmark and the Contrasting Groups. A composite (average) of the two studies was also considered.

Board-Approved Cut Scores

The final State Board of Education approved cut scores and the percentage of spring 2012 students in each Performance Level are shown in Table 3.4.1. These values in the scale score metric will not change from year to year. The *Raw Score Ranges* may vary from year to year, depending on the difficulty of the specific form, and the *Percent in Each Performance Level* will vary, depending on the proficiency of the students at that time.

Cut scores are defined in a logit metric, which, like scale scores, are fixed. Logits are related to percentage correct scores but are preferred because they are not tied to a specific test form and will not change from year to year. This ensures a consistent definition of the Performance Levels even if different test forms vary in difficulty. For reporting purposes, logits are converted into the scale scores, which is mathematically equivalent but more user-friendly.

[1] The term *standard* is used in two different senses in this area. *Content standards* are written descriptions of the goals and expectations for learning and instruction at each grade level. *Performance standard*s, which are the focus of this section, define the levels of achievement necessary for each Performance Level. In some contexts, the term *performance standard* is interchangeable with *cut score*.

Table 3.4.1 Logit and 2012 Raw Score Cut points for NeSA-S

	Scale Score Ranges by Performance Level			2011 Raw Score Ranges by Performance Level			Logit Cut Points		2011 Percent in Each Performance Level		
Grade	Below	Meets	Exceeds	Below	Meets	Exceeds	B/M	M/E	Below	Meets	Exceeds
5	1 to 84	85-134	135 to 200	1 to 30	31 to 43	44 to 50	-0.4971	1.0580	33.6	52.0	14.4
8	1 to 84	85-134	135 to 200	1 to 35	36 to 50	51 to 60	-0.4543	1.0378	32.4	52.1	15.4
11	1 to 84	85-134	135 to 200	1 to 32	33 to 51	52 to 60	-0.5407	1.3130	33.0	54.0	13.1

The meaning of the logit and scale score values will not change in the future, but the raw score ranges may shift slightly to reflect the variation in item and form difficulty; a more difficult form will require fewer correct responses and an easier form will require more. With a stable scale score cut point, changes in the percentage of students in each proficiency level will reflect changes in student proficiency and not changes in form difficulty.

3.5 Scale Score Metric

Defining the scale score metric is an important, albeit arbitrary, step. Mathematically, scale scores are a linear transformation of the logit scores and thus do not alter the relationships or the displays. Scale scores simply provide more attractive labels for the scales. This is not meant to minimize the practical importance of this step because these are the numbers that will be reported to describe the performance of the students, schools, and systems. They will define the ranges of the performance levels, appear on individual student reports and school accountability analyses, and be dissected in newspaper accounts.

Appendix P contains the detailed raw score to scale score conversion tables that were used to assign Scale Scores to students based on the total number correct scores from the NeSA-R for 2010, Appendix Q for NeSA-M for 2011 and Appendix R for NeSA-S 2012. Because the relationship between raw and scale scores depends on the difficulties of the specific items on the form, these tables will change for every operational form.

There are two primary considerations when establishing the metric:

- Multiply the logit by a value large enough to make decimal points unnecessary for student scores, and
- Shift the scale enough to avoid negative values for low Scales Scores.

The scale chosen for all grades of the NeSA will range from 0 to 200. The value of 0 is reserved for students who were not tested or were otherwise invalidated. Any student who attempted the test will receive a Scale Score equal to 1 even if the student gave no correct responses. No student tested will receive a Scale Score higher than 200 or lower than 1 even if this requires constraining the Scale Score calculation. It is possible that a future form will be easy enough that the upper limit of 200 is not invoked even for a perfect paper or could be difficult enough that the lower limit is not invoked.

As part of its deliberations concerning defining the performance levels, the State Board of Education specified that the *Meets the Standards* performance level have a Scale Score of 85 and that the *Exceeds the Standards* level have a Scale Score of 135. Together with the logit standards adopted by the SBE, this is sufficient to define the final Scale Score Metric.

To ensure proper rounding on all future forms, the calculations used 84.501 and 134.501 as the Scale Score performance standards. The arithmetic was done using logits rounded to four decimals and the final constants for the slope and intercept of the transformation were rounded to five. Scale Scores are rounded to whole numbers. Otherwise the calculation is straightforward.

The transformation to Scales Scores is:

1. SS = $a + b$ * logit where
2. $b = \frac{134.501-84.501}{x_E - x_M}$ where x_E is the logit for *Exceeds Standards* and x_M is the logit for *Meets Standards*.
3. $a = 84.501 - bx_M$ or $a = 134.501 - bx_E$.

Calculations of the slopes and intercepts for all grades of the NeSA-R Scale Score conversion are given in Table 3.5.1, for NeSA-M 3.5.2, and for NeSA-S 3.5.3. The Raw-to-Scale conversions are provided in Appendices P, Q, and R.

Table 3.5.1 NeSA-R Conversion of Logits to Scale Scores

	Logit Cut Points		Scale Score Ranges by Performance Level			Conversion	
Grade	B/M	M/E	Below	Meets	Exceeds	Slope b	Intercept a
3	-0.5168	1.2340	1 to 84	85-134	135 to 200	28.55837	99.25997
4	-0.5117	0.8591	1 to 84	85-134	135 to 200	36.47505	103.16528
5	-0.4122	0.8560	1 to 84	85-134	135 to 200	39.42751	100.75302
6	-0.4331	0.8924	1 to 84	85-134	135 to 200	37.72161	100.83823
7	-0.5104	0.7855	1 to 84	85-134	135 to 200	38.58471	104.19271
8	-0.4812	0.8712	1 to 84	85-134	135 to 200	36.97131	102.29159
11	-0.4103	0.8508	1 to 84	85-134	135 to 200	39.64793	100.76854

Table 3.5.2 NeSA-M Conversion of Logits to Scale Scores

	Logit Cut Points		Scale Score Ranges by Performance Level			Conversion	
Grade	B/M	M/E	Below	Meets	Exceeds	Slope b	Intercept a
3	-0.6000	1.1000	1 to 84	85-134	135 to 200	29.41176	102.15706
4	-0.6000	1.2000	1 to 84	85-134	135 to 200	27.77778	101.17667
5	-0.5700	1.1597	1 to 84	85-134	135 to 200	28.90675	100.98685
6	-0.4700	1.1816	1 to 84	85-134	135 to 200	30.27367	98.73862
7	-0.4500	1.2500	1 to 84	85-134	135 to 200	29.41176	97.74529
8	-0.4000	1.3000	1 to 84	85-134	135 to 200	29.41176	96.27470
11	-0.2900	1.1000	1 to 84	85-134	135 to 200	35.97122	94.94165

Table 3.5.3 NeSA-S Conversion of Logits to Scale Scores

	Logit Cut Points		Scale Score Ranges by Performance Level			Conversion	
Grade	B/M	M/E	Below	Meets	Exceeds	Slope b	Intercept a
5	-0.4971	1.0580	1 to 84	85-134	135 to 200	32.15095	100.49331
8	-0.4543	1.0378	1 to 84	85-134	135 to 200	33.50958	99.73252
11	-0.5407	1.3130	1 to 84	85-134	135 to 200	26.97256	99.09502

3.6 Mathematics Pre- and Post-Equated Comparison

The intent of the NeSA exams is that the item parameter estimates are established from the initial field test data and considered fixed over the life of the items. Any changes in curriculum or instruction will be reflected in improved student performance and with no opportunity of being absorbed by revisions in the parameter estimates. The underlying assumption is that these changes will affect all items uniformly rather than uniquely by item, item type, or content standard. At the initial stages of the assessment, at least, this assumption should be verified.

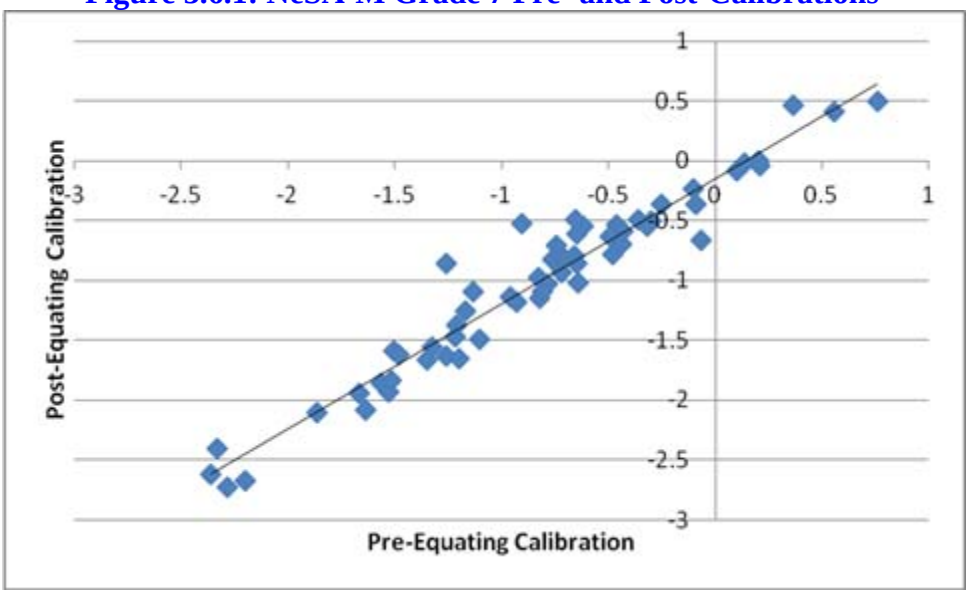
For the 2012 NeSA-M form, a check was done by comparing the previous item calibrations with an unanchored calibration of the 2012 data. One expects, through the measurement models invariance parameters, to obtain statistically equivalent estimates with a possible shift in the mean. These comparisons are present in Table 3.6.1 below.

Table 3.6.1 NeSA-M Pre- and Post Equating Comparison

	Grade						
	3	4	5	6	7	8	11
Correlation	0.95	0.94	0.90	0.87	0.97	0.94	0.96
SD pre	0.65	0.69	0.61	0.69	0.71	0.65	0.61
SD post	0.70	0.79	0.61	0.66	0.76	0.60	0.63
Ratio SD	0.94	0.87	0.99	1.05	0.93	1.08	0.96

Common criteria for comparing item calibrations across years are correlations of at least 0.95 and a ratio of standard deviations of between 0.90 and 1.10 (Huynh & Meyer, 2010). The high correlation ensures the items define the same construct and the ratio of SD's near one ensures a consistent unit. These data meet the criteria in all grades. The relationship for grade 7 is shown graphically below; detailed data are presented in Appendix V.

Figure 3.6.1: NeSA-M Grade 7 Pre- and Post-Calibrations



4. Reading, Mathematics, and Science Embedded Field Test

4.1 Psychometric Summary

Traditional Item Statistics: The statistics computed are defined in detail in Section 3.2 above and traditional statistics for each NeSA-R field test item are in Appendices H and K, for NeSA-M Appendices I and L and NeSA-S Appendices J and M. The tables below provide summaries of the distributions of item percents correct, point-biserial correlations, and differential item functioning codes. Items with negative point-biserial correlations were never considered for operational use. Item with correlations less than 0.2 or percents correct less than 0.3 or greater 0.9 were avoided when possible.

Table 4.1.1 Summary of Traditional Item Statistics for NeSA-R 2012 Field Test Items

	Item Percent Correct										
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	<=0.7	<=0.8	<=0.9	>0.9	Total
3	0	1	1	3	8	5	13	7	10	2	50
4	0	0	1	4	10	6	10	7	10	2	50
5	0	1	3	3	3	4	15	9	11	1	50
6	0	1	1	4	4	9	9	6	15	1	50
7	0	0	0	4	4	4	13	13	10	2	50
8	0	0	3	5	6	2	14	9	8	3	50
11	0	0	0	4	7	10	14	12	3	0	50

	Item Point-biserial Correlation							
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	>0.6	Total
3	1	3	10	18	17	1	0	50
4	2	7	12	16	13	0	0	50
5	3	4	6	21	15	1	0	50
6	2	0	9	26	13	0	0	50
7	3	0	6	21	19	1	0	50
8	5	2	12	15	14	2	0	50
11	1	1	9	12	21	6	0	50

Table 4.1.2 Summary of Traditional Item Statistics for NeSA-M 2012 Field Test Items

	Item Percent Correct										
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	<=0.7	<=0.8	<=0.9	>0.9	Total
3	0	0	0	0	0	5	7	9	16	13	50
4	0	0	1	0	4	5	6	12	16	6	50
5	1	0	2	1	6	6	7	13	12	2	50
6	0	1	0	1	3	4	11	14	13	4	51
7	0	0	2	6	11	11	10	6	3	1	50
8	0	0	2	4	7	11	14	8	4	0	50
11	0	0	5	9	10	12	9	4	1	0	50

	Item Point-biserial Correlation							
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	>0.6	Total
3	0	2	6	22	17	3	0	50
4	1	2	9	16	19	3	0	50
5	3	1	8	15	17	5	1	50
6	1	1	9	15	18	6	1	51
7	0	1	7	19	19	3	1	50
8	2	0	7	14	16	11	0	50
11	1	0	5	13	16	14	1	50

Table 4.1.3 Summary of Traditional Item Statistics for NeSA-S 2012 Field Test Items

	Item Percent Correct										
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	<=0.7	<=0.8	<=0.9	>0.9	Total
5	0	0	0	5	3	7	8	11	10	6	50
8	0	0	4	2	8	14	7	11	3	1	50
11	0	2	6	12	10	4	6	8	2	0	50

	Item Point-biserial Correlation							
Grade	<=0.1	<=0.2	<=0.3	<=0.4	<=0.5	<=0.6	>0.6	Total
5	1	4	14	19	11	1	0	50
8	0	5	17	18	10	0	0	50
11	10	7	8	9	11	5	0	50

Differential Item Functioning (DIF): defined as the situation in which the likelihood of success on an item is partially predicted by group membership. Operationally, this is computed as the difference in the likelihood of success for examinees with the same level of proficiency but who were members of

different sub-groups. DIF can occur if the item involves factors that differentially advantage or disadvantage specific groups of students. Items exhibiting DIF were referred to content specialists to determine possible bias.

Within the context of the Rasch measurement models, DIF is a direct violation of the model requirements that the probability of success depends only on item difficulty and person ability. Hence, DIF analysis is a natural consequence of Rasch analysis. The Winsteps software was used to compute DIF statistics that directly compare group performance on the items after adjusting for any differences in the ability distributions of the examinees. Items with DIF codes of C (significance level less than 0.01) or B (significance level less than 0.1) were flagged for review by content and bias specialists, with emphasis on items that disadvantage the focal group. The level depends on the magnitude of the discrepancy between the groups of interest and the likelihood it could arise by chance. Large group sizes and equal numbers result in a very sensitive test. Tables 4.1.3 – 4.1.5 show summaries of the DIF statistics. The plus and minus codes on the B and C indicates which group is favored. Plus means the focal group was favored; minus means the focal group was disadvantaged. The first column defines the focal group; codes with a minus sign indicate items that disadvantaged this group in comparison to the reference group, which is male for gender or White for ethnicity. Appendices K, L and M provide more summary information on DIF analysis.

Table 4.1.3 Summary of DIF by Code for NeSA-R 2012 Field Test

Grade 3	A	B+	B-	C+	C-	FT Items
Female	49	0	1	0	0	50
Black	49	0	1	0	0	50
Hispanic	48	0	1	0	1	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	10	0	0	0	0	50

Grade 4	A	B+	B-	C+	C-	FT Items
Female	49	0	1	0	0	50
Black	45	0	5	0	0	50
Hispanic	47	0	3	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	9	0	1	0	0	50

Grade 5	A	B+	B-	C+	C-	FT Items
Female	49	1	0	0	0	50
Black	42	0	7	0	1	50
Hispanic	46	0	3	0	1	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	9	0	1	0	0	50

Grade 6	A	B+	B-	C+	C-	FT Items
Female	47	0	2	0	1	50
Black	41	0	7	0	2	50
Hispanic	45	1	4	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	9	0	1	0	0	50

Grade 7	A	B+	B-	C+	C-	FT Items
Female	45	1	2	1	1	50
Black	46	0	4	0	0	50
Hispanic	47	0	3	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	0	0	0	0	0	50

Grade 8	A	B+	B-	C+	C-	FT Items
Female	47	1	1	0	1	50
Black	44	0	6	0	0	50
Hispanic	46	0	4	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	0	0	0	0	0	50

Grade 11	A	B+	B-	C+	C-	FT Items
Female	46	2	2	0	0	50
Black	42	1	7	0	0	50
Hispanic	46	0	2	1	1	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	0	0	0	0	0	50

Table 4.1.4 Summary of DIF by Code for NeSA-M 2012 Field Test

Grade 3	A	B+	B-	C+	C-	FT Items
Female	45	5	0	0	0	50
Black	21	0	3	0	1	50
Hispanic	45	1	2	1	1	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	8	1	0	0	1	50
2 or more Races	10	0	0	0	0	50

Grade 4	A	B+	B-	C+	C-	FT Items
Female	47	1	2	0	0	50
Black	10	0	3	0	0	50
Hispanic	44	2	3	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	8	1	0	0	1	50
2 or more Races	10	0	0	0	0	50

Grade 5	A	B+	B-	C+	C-	FT Items
Female	45	3	2	0	0	50
Black	25	0	2	0	0	50
Hispanic	48	1	1	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	7	2	1	0	0	50
2 or more Races	10	0	0	0	0	50

Grade 6	A	B+	B-	C+	C-	FT Items
Female	46	1	3	0	1	51
Black	12	0	0	0	0	51
Hispanic	42	1	7	0	1	51
American Indian/Alaska Native	0	0	0	0	0	51
Asian	8	2	0	0	0	51
2 or more Races	10	0	0	0	0	51

Grade 7	A	B+	B-	C+	C-	FT Items
Female	48	0	1	0	1	50
Black	29	0	0	0	0	50
Hispanic	49	0	1	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	9	1	0	0	0	50
2 or more Races	10	0	0	0	0	50

Grade 8	A	B+	B-	C+	C-	FT Items
Female	48	1	1	0	0	50
Black	19	0	0	0	0	50
Hispanic	50	0	0	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	10	0	0	0	0	50

Grade 11	A	B+	B-	C+	C-	FT Items
Female	48	1	1	0	0	50
Black	10	0	0	0	0	50
Hispanic	46	0	3	0	1	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	5	3	0	1	1	50
2 or more Races	10	0	0	0	0	50

Table 4.1.5 Summary of DIF by Code for NeSA-S2012 Field Test

Grade 5	A	B+	B-	C+	C-	FT Items
Female	47	3	0	0	0	50
Black	45	0	3	0	0	50
Hispanic	49	0	1	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	0	0	0	0	0	50

Grade 8	A	B+	B-	C+	C-	FT Items
Female	47	1	1	0	1	50
Black	42	1	4	0	0	50
Hispanic	47	1	2	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	0	0	0	0	0	50

Grade 11	A	B+	B-	C+	C-	FT Items
Female	48	0	2	0	0	50
Black	44	1	3	0	0	50
Hispanic	49	0	1	0	0	50
American Indian/Alaska Native	0	0	0	0	0	50
Asian	0	0	0	0	0	50
2 or more Races	0	0	0	0	0	50

5. Online Testing Times

5.1 Online Testing Time

Figures 5.1.1, 5.1.2, and 5.1.3 contain a breakout of testing times from the 2012 NeSA-R, NeSA-M, and NeSA-S assessments respectively. The data (see Table 5.1.1, 5.1.2, and 5.1.3) were compiled based on students who had a *single login, a single logout,* and *responded to all the items.* In contrast to 2011, there was a slightly bigger difference in the time spent in sessions 1 and 2 indicating a tendency toward less time in the second session for all subjects.

Figure 5.1.1 Duration of Online Reading Testing Time by Grade and Session

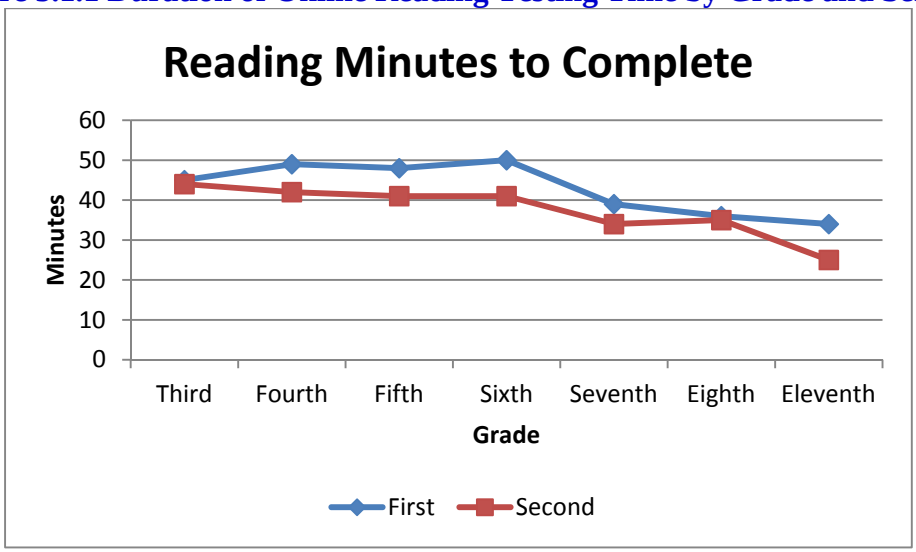


Figure 5.1.2 Duration of Online Mathematics Testing Time by Grade and Session

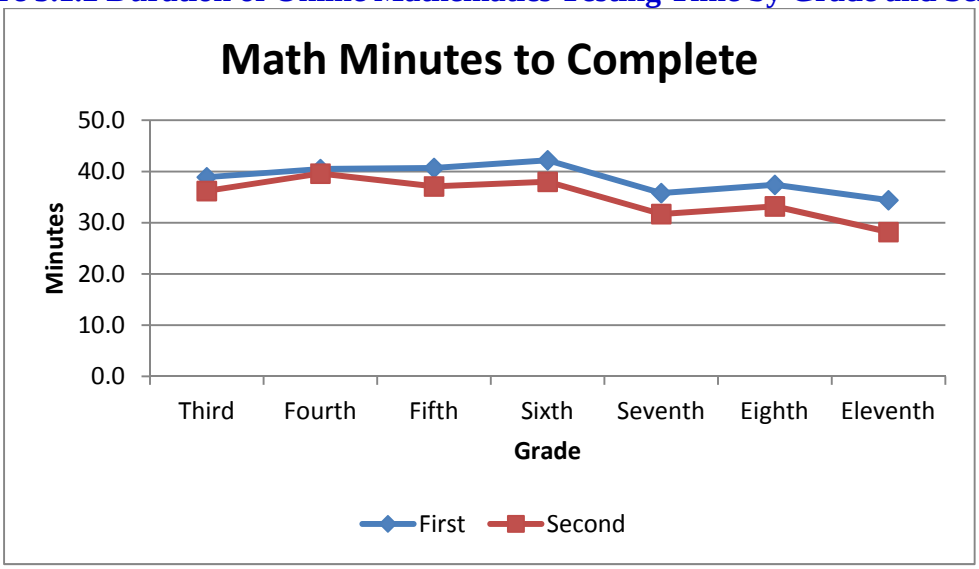
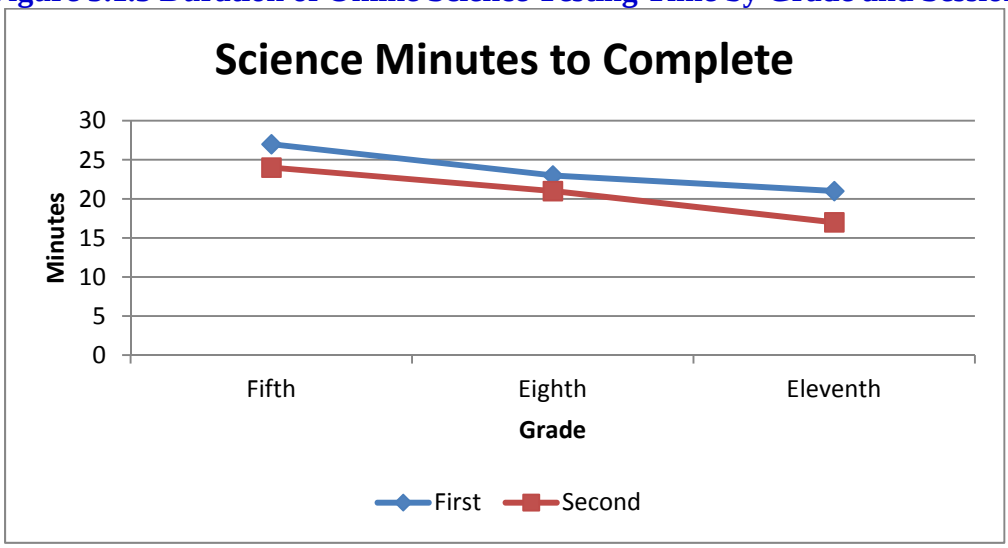


Figure 5.1.3 Duration of Online Science Testing Time by Grade and Session



As compared to 2011, there were substantially less students who answered every item in less than five minutes. The rest of the distribution of times was comparable. Similar to 2011, the frequency of shorter times in session 2 increased with grade level. The outliers on the other end, greater than 90 minutes, are also interesting because these data do not include students who *paused out*, had the test ended due to inactivity, or were reactivated. It appears that they were actively involved with the test for the full time between the login and logout, but it raises the question of how fully engaged those students may have been for that amount of time.

Table 5.1.1 Duration of Online Reading Testing Sessions

Grade	3		4		5		6		7		8		11	
Session	1	2	1	2	1	2	1	2	1	2	1	2	1	2
<5	0	7	0	2	0	3	0	1	4	10	6	21	52	166
5-10	6	25	1	14	3	15	2	9	16	37	15	66	125	532
10-15	53	76	20	93	24	101	11	56	72	275	100	274	407	1901
15-20	278	355	116	454	135	496	101	378	391	1170	712	1032	1243	4018
20-25	866	1161	490	1325	566	1446	440	1183	1348	2738	2044	2334	2547	**4444**
25-30	1921	2093	1161	2163	1313	2564	1121	2451	2661	3622	3280	3278	3514	3347
30-35	2574	2662	1882	2714	2083	3055	1928	3145	3330	**3328**	3486	3203	**3463**	2073
35-40	2678	2705	2381	2686	2534	2798	2399	2954	**3021**	2475	**2822**	**2710**	2736	1053
40-45	**2385**	**2283**	2355	**2359**	2631	**2302**	2492	**2172**	2277	1559	1937	1677	1759	510
45-50	2042	1851	**2193**	1838	**2218**	1694	**2164**	1599	1696	966	1190	1069	1086	307
50-55	1534	1330	1893	1228	1804	1193	1653	1094	1089	613	729	659	624	180
55-60	1107	1085	1493	973	1375	830	1383	836	687	394	465	426	364	108
60-65	863	771	1131	707	1075	582	1083	532	440	237	263	314	213	65
65-70	616	514	895	501	683	448	829	437	286	159	195	178	143	36
70-75	398	389	569	307	551	311	529	259	171	120	131	118	99	27
75-80	310	263	423	207	394	214	430	191	122	75	102	84	66	15
80-85	199	196	302	130	250	158	324	130	70	57	69	64	38	14
85-90	123	157	204	102	204	94	241	139	69	38	49	35	33	9
>90	375	394	521	274	557	212	713	305	150	105	118	130	64	33
Total	1832	1831	1803	1807	1840	1851	1784	1787	1790	1797	1771	1767	1857	1883
Mean	44.8	43.7	49.3	42.1	48.2	40.8	49.9	41.4	39.3	34.1	36.3	35.1	33.7	24.7

Table 5.1.2 Duration of Mathematics Online Testing Sessions

Grade	3		4		5		6		7		8		11	
Sessio	1	2	1	2	1	2	1	2	1	2	1	2	1	2
<5	0	6	0	3	0	1	3	2	4	14	6	11	61	118
5-10	8	22	2	11	6	19	3	7	18	36	24	59	149	328
10-15	90	204	66	77	57	104	22	74	76	278	72	172	253	670
15-20	697	1223	469	466	396	790	237	631	592	1425	380	1013	687	1506
20-25	1776	2279	1379	1545	1376	2161	1051	1829	1822	2759	1379	2505	1383	2508
25-30	2320	2529	2175	2413	2151	2575	1942	2467	2808	3146	2643	3053	2217	**2792**
30-35	2267	2146	2281	2416	2425	2367	2232	2407	2690	**2399**	2843	**2540**	**2562**	2150
35-40	**1935**	**1678**	2196	**2012**	2076	**1845**	2116	**1851**	**2172**	1629	**2248**	1769	2088	1321
40-45	1539	1307	**1633**	1550	**1597**	1335	**1689**	1279	1520	962	1579	1121	1485	691
45-50	1108	887	1176	1185	1258	932	1285	989	1013	642	1052	716	887	346
50-55	833	673	918	826	872	657	930	705	614	378	680	444	464	167
55-60	586	488	658	597	601	444	646	418	361	269	453	281	248	95
60-65	404	353	486	407	426	346	483	330	247	166	316	184	159	56
65-70	302	265	304	256	317	240	311	250	156	99	201	143	78	38
70-75	202	184	258	203	212	191	248	182	103	51	106	95	51	28
75-80	148	105	183	137	188	118	183	133	59	46	86	44	32	25
80-85	112	68	100	142	112	68	140	86	40	36	56	40	29	13
85-90	68	56	71	80	86	82	88	66	16	16	33	21	20	5
>90	200	180	237	231	286	192	299	231	75	49	110	69	34	5
Total	1459	1465	1459	1455	1444	1446	1390	1393	1438	1440	1426	1428	1288	1286
Mean	38.9	36.2	40.5	39.6	40.7	37.1	42.2	38.0	35.8	31.7	37.4	33.2	34.4	28.2

Table 5.1.3 Duration of Science Online Testing Sessions

Grade	5		8		11	
Session	1	2	1	2	1	2
<5	1	3	12	18	159	288
5-10	42	134	74	147	483	1161
10-15	1091	2113	1936	2797	2416	5816
15-20	3872	4843	5690	6531	5794	**6694**
20-25	4612	**4534**	**5130**	**4657**	**5122**	2715
25-30	**3420**	2938	2754	2128	2445	882
30-35	2061	1637	1245	906	975	330
35-40	1328	994	605	449	395	135
40-45	804	495	347	262	192	90
45-50	460	281	177	134	91	35
50-55	310	180	121	102	59	21
55-60	183	138	58	45	39	12
60-65	96	53	41	30	24	8
65-70	58	33	23	17	11	8
70-75	38	18	11	15	4	2
75-80	26	23	16	11	8	4
80-85	26	8	12	6	5	2
85-90	11	4	6	4	2	3
>90	14	13	6	7	10	8
Total	18453	18442	18264	18266	18234	18214
Mean	27.0	24.3	23.0	21.5	21.2	17.0

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Spring 2012

Nebraska State Accountability (NeSA)

Reading Operational and Field Test

Mathematics Operational and Field Test

Science Operational and Field Test

Technical Report Appendices

October 2012

Prepared by Data Recognition Corporation

DATA RECOGNITION

DRC

CORPORATION

Appendix A: Legislative Bill 1157

LEGISLATURE OF NEBRASKA

ONE HUNDREDTH LEGISLATURE

SECOND SESSION

LEGISLATIVE BILL 1157

FINAL READING

Introduced by Raikes, 25.

Read first time January 23, 2008

Committee: Education

A BILL

FOR AN ACT relating to education; to amend sections 79-758, 79-760.01, 79-760.02, 79-760.03, and 79-760.05, Revised Statutes Supplement, 2007; to change provisions relating to statewide assessment and reporting; and to repeal the original sections.

Be it enacted by the people of the State of Nebraska,

Section 1. Section 79-758, Revised Statutes Supplement, 2007, is amended to read:

79-758 For purposes of the Quality Education Accountability Act:

(1) Assessment means the process of measuring student achievement and progress on ~~state and locally adopted~~ state-adopted standards;

(2) Assessment instrument means a test aligned with state ~~and local~~ standards that is designed to measure student progress and achievement; and

~~(3) Assessment portfolio means the compilation of assessment practices and procedures, assessment instruments, and national assessment instruments used by a school district in meeting assessment and reporting requirements; and~~

~~(4)~~ (3) National assessment instrument means a nationally norm-referenced test developed and scored by a national testing service.

Sec. 2. Section 79-760.01, Revised Statutes Supplement, 2007, is amended to read:

79-760.01 The State Board of Education shall adopt measurable ~~model~~ academic content standards for at least ~~three~~ the grade levels required for statewide assessment pursuant to section 79-760.03. The standards shall cover the subject areas of reading, writing, mathematics, science, and social studies. The standards adopted shall be sufficiently clear and measurable to be

used for testing student performance with respect to mastery of the content described in the state standards. The State Board of Education shall develop a plan to review and update standards for each subject area every five years. The state board shall review and update the standards in reading by July 1, 2009, the standards in mathematics by July 1, 2010, and the standards in all other subject areas by July 1, 2013. The state board plan shall include a review of commonly accepted standards adopted by school districts.

Sec. 3. Section 79-760.02, Revised Statutes Supplement, 2007, is amended to read:

79-760.02 In accordance with timelines that are adopted by the State Board of Education, but in no event later than one year following the adoption or modification of state standards, each school district shall adopt measurable quality academic content standards in the subject areas of reading, writing, mathematics, science, and social studies. The standards may be the same as, or may be equal to or exceed in rigor, the measurable ~~model~~ academic content standards adopted by the state board and shall cover at least the same grade levels. School districts may work collaboratively with educational service units, with learning communities, or through interlocal agreements to develop such standards. Educational service units and learning communities shall develop a composite set of standards shared by member school districts. ~~The State Department of Education shall adopt and promulgate appropriate rules and regulations to insure the rigor of~~

~~the measurable quality academic content standards.~~

Sec. 4. Section 79-760.03, Revised Statutes Supplement, 2007, is amended to read:

79-760.03 (1) For school year 2009-10 and each school year thereafter, the State Board of Education shall implement a statewide system for the assessment of student learning and for reporting the performance of school districts and learning communities pursuant to this section. The assessment and reporting system shall measure student knowledge of subject matter materials covered by measurable academic content standards selected by the state board.

(2) The state board shall adopt a plan for an assessment and reporting system and implement and maintain the assessment and reporting system according to such plan. The plan shall be submitted annually to the State Department of Education, the Governor, the chairperson of the Education Committee of the Legislature, and the Clerk of the Legislature. The state board shall select ~~three~~ grade levels for assessment and reporting required pursuant to subsections (4) through (7) of this section. The purposes of the system are to:

(a) Determine how well public schools are performing in terms of achievement of public school students related to the state academic content standards;

(b) Report the performance of public schools based upon the results of state assessment instruments and national assessment

instruments;

(c) Provide information for the public and policymakers on the performance of public schools; and

(d) Provide for the comparison among Nebraska public schools and the comparison of Nebraska public schools to public schools elsewhere.

(3) The Governor shall appoint a technical advisory committee to review the statewide assessment plan and state assessment instruments developed under the Quality Education Accountability Act. The technical advisory committee shall consist of three nationally recognized experts in educational assessment and measurement, one administrator from a school in Nebraska, and one teacher from a school in Nebraska. The members shall serve terms of three years, except that two of the members shall be appointed for initial terms of two years. Any vacancy shall be filled by the Governor for the remainder of the term. One of the members shall be designated as chairperson by the Governor. Members shall be reimbursed for their actual and necessary expenses as provided in sections 81-1174 to 81-1177. The committee shall advise the Governor, the state board, and the State Department of Education on the development of statewide assessment instruments and the statewide assessment plan. The appointments to the committee shall be confirmed by the Legislature.

~~(3)~~ (4) The state board shall prescribe a statewide assessment of writing that relies on writing samples in each of

three grades selected by the state board. Each year at least one of the three selected grades shall participate in the statewide writing assessment with each selected grade level participating at least once every three years.

~~(4)~~ (5) For school year 2009-10 and for each school year thereafter, the state board shall prescribe a statewide assessment of reading. ~~that is based on model assessments developed pursuant to section 79-760. The reading assessment instruments shall be developed in collaboration with educational service units and be approved by a majority of the educational service unit administrators.~~ The statewide assessment of reading shall include assessment instruments for each of the grade levels three through eight and for one grade in high school and standards ~~selected~~ adopted by the state board pursuant to section 79-760.01.

~~(5)~~ (6) For no later than school year 2010-11 and for each school year thereafter, the state board shall prescribe a statewide assessment of mathematics. ~~that is based on model assessments developed pursuant to section 79-760. The mathematics assessment instruments shall be developed in collaboration with educational service units and be approved by a majority of the educational service unit administrators.~~ The statewide assessment of mathematics shall include assessment instruments for each of the grade levels three through eight and for one grade in high school and standards ~~selected~~ adopted by the state board pursuant to section 79-760.01. If no statewide assessment of mathematics

is administered in school year 2009-10, school districts shall report mathematics assessment results in the same manner as such information was reported in school year 2008-09.

~~(6) School districts shall develop assessment portfolios. Such assessment portfolios may be developed through school district collaboration with educational service units and learning communities or through interlocal agreements. Educational service units shall conduct a peer review of local district assessments annually. Educational service units shall submit documentation of the district portfolios for review by the State Department of Education not more than once every three years. Assessment portfolios shall include all assessment instruments required by the state board and by the Quality Education Accountability Act.~~

~~(7) The department shall identify criteria for rating assessment instruments and assessment portfolios. The department shall establish statewide minimum proficiency levels for local assessments and shall include proficiency levels in the rating of assessment instruments and assessment portfolios. The department shall contract with independent, recognized assessment experts to review and rate locally developed assessment instruments and portfolios according to such criteria and proficiency levels.~~

(7) For no later than school year 2011-12 and each school year thereafter, the state board shall prescribe a statewide assessment of science. The statewide assessment of science shall include assessment instruments for each of the grade levels

selected by the state board and standards adopted by the state board pursuant to section 79-760.01. The grade levels shall include at least one grade in elementary school, one grade in middle school or junior high school, and one grade in high school.

(8) The department shall conduct studies to verify the technical quality of assessment instruments and demonstrate the comparability of assessment instrument results required by the ~~Quality Education Accountability Act.~~ act. The department shall annually report such findings to the Governor, the Legislature, and the ~~State Board of Education.~~ state board.

(9) The ~~State Board of Education~~ state board shall recommend national assessment instruments for the purpose of national comparison. Each school district shall ~~include national assessment instruments in its assessment portfolio.~~ report individual student data for scores and sub-scores according to procedures established by the state board and the department pursuant to section 79-760.05.

(10) The aggregate results of assessment instruments and national assessment instruments shall be reported by the district on a building basis to the public in that district, to the learning community coordinating council if such district is a member of a learning community, and to the department. Each learning community shall also report the aggregate results of any assessment instruments and national assessment instruments to the public in that learning community and to the department. The

department shall report the aggregate results of any assessment instruments and national assessment instruments on a learning community, district, and building basis as part of the statewide assessment and reporting system.

(11)(a) The assessment and reporting plan shall:

(i) Provide for the confidentiality of the results of individual students; and

(ii) Include all public schools and all public school students.

(b) The state board shall adopt criteria for the inclusion of students with disabilities, students entering the school for the first time, and students with limited English proficiency.

The department may determine appropriate accommodations for the assessment of students with disabilities or any student receiving special education programs and services pursuant to section 79-1139. Alternate academic achievement standards in reading, mathematics, and science and alternate assessment instruments aligned with the standards may be among the accommodations for students with severe cognitive disabilities.

(12) The state board may select additional grade levels and additional subject areas for statewide assessment instruments to comply with federal requirements.

(13) The state board shall not require school districts to administer assessments or assessment instruments other than as

prescribed by the act.

(14) The state board shall appoint committees of teachers, from each appropriate subject area, and administrators to assist in the development of statewide assessment instruments required by the act.

Sec. 5. Section 79-760.05, Revised Statutes Supplement, 2007, is amended to read:

79-760.05 (1) The State Board of Education shall implement a statewide system for tracking individual student achievement, using the student identifier system of the State Department of Education, that can be aggregated to track student progress by demographic characteristics, including, but not limited to, race, poverty, high mobility, attendance, and limited English proficiency, on available measures of student achievement which include, but need not be limited to, national assessment instruments~~,~~ and state assessment instruments. ~~, local assessment instruments, and other similar measures.~~ Such a system shall be designed so as to aggregate student data by available educational input characteristics, which may include class size, teacher education, teacher experience, special education, early childhood programs, federal programs, and other targeted education programs. School districts shall provide the department with individual student achievement data ~~as requested~~ from assessment instruments required pursuant to section 79-760.03 in order to implement the statewide system.

(2) The department and the coordinator appointed pursuant to section 79-11,150 shall annually analyze and report on student achievement for the state, each school district, and each learning community aggregated by the demographic characteristics described in subsection (1) of this section. The department shall report the findings to the Governor, the Legislature, school districts, educational service units, and each learning community. Such analysis shall include aggregated data that would indicate differences in achievement due to available educational input characteristics described in subsection (1) of this section. Such analysis shall include indicators of progress toward state achievement goals for students in poverty, limited English proficient students, and highly mobile students according to the plan developed by the coordinator pursuant to section 79-11,150.

Sec. 6. Original sections 79-758, 79-760.01, 79-760.02, 79-760.03, and 79-760.05, Revised Statutes Supplement, 2007, are repealed.

Appendix B: NeSA-R Test Blueprint

Nebraska State Accountability - Reading (NeSA-R) Table of Specifications					
Grade 3					
Gr3 Vocabulary	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 3.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.					
LA 3.1.5.a *Apply word structure elements, known words, and word patterns to determine meanings (e.g., contractions, plurals, possessives, basic parts of speech, compounds, syllables)*	1	4-6	0	0	4-6
LA 3.1.5.b *Relate new grade level vocabulary to prior knowledge and use in new situations*	Assessed at the local level				
LA 3.1.5.c *Apply context clues (e.g., word, phrase, and sentence clues, re-reading) and text features (e.g., table of contents, maps, charts, font/format styles) to help infer meaning of unknown word*	2	2-3	2-3	0	4-6
LA 3.1.5.d *Identify semantic relationships (e.g., patterns and categories, synonyms, antonyms, homonyms, multiple meanings)*	1	4-6	0	0	4-6
LA 3.1.5.e *Identify meaning using print and digital reference materials (e.g., dictionary, glossary)*	Assessed at the local level				
LA 3.1.5.f *Locate words in reference materials (e.g., alphabetical order, guide words)*	Assessed at the local level				
Gr3 Comprehension	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 3.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.					
LA 3.1.6.a *Identify author purpose(s) (e.g., explain, entertain, inform, persuade) to support text comprehension*	3	0	0-1	1-2	1-3
LA 3.1.6.b *Identify elements of narrative text (e.g., characters, setting, plot, point of view)*	1	4-6	0	0	4-6
LA 3.1.6.c *Retell and summarize narrative text including characters, setting, and plot with supporting details*	2	1-2	3-4	0	4-6

LA 3.1.6.d *Identify literary devices and explain the ways in which language is used (e.g., simile, alliteration, onomatopoeia, imagery, rhythm)*	2	0-1	1-2	0	1-3
LA 3.1.6.e *Retell and summarize the main idea from informational text using supporting details*	2	1-2	2-4	0	3-6
LA 3.1.6.f *Recognize and apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare/contrast)*	2	1-2	2-3	0	3-5
LA 3.1.6.g *Apply knowledge of text features to locate information and gain meaning from a text (e.g., table of contents, maps, charts, illustrations, headings, captions, font/format styles)*	2	1-3	2-3	0	3-6
LA 3.1.6.h *Describe the defining characteristics of narrative and informational genres (e.g., folk tales, poetry, historical fiction, biographies, chapter books, textbooks)*	2	0	1-3	0	1-3
LA 3.1.6.i *Use narrative or informational text to develop a multi-cultural perspective*	Assessed at the local level				
LA 3.1.6.j *Generate and/or answer literal, inferential, and critical questions, supporting answers using prior knowledge and literal and inferential information from the text*	3	1-2	1-2	1-2	3-6
LA 3.1.6.k *Identify and explain purpose for reading (e.g., information, pleasure, understanding)*	Assessed at the local level				
LA 3.1.6.l *Build and activate prior knowledge in order to identify text to self, text to text, and text to world connections before, during, and after reading*	Assessed at the local level				
LA 3.1.6.m *Self-monitor comprehension by recognizing when meaning is disrupted and apply strategies to clarify, confirm, or correct*	Assessed at the local level				
LA 3.1.6.n *Make and confirm/modify predictions before, during, and after reading (e.g., captions, headings, character traits, personal experience)*	Assessed at the local level				
LA 3.1.6.o *Use examples and details in a text to make inferences about a story or situation*	Assessed at the local level				
LA 3.1.6.p *Respond to text verbally, in writing, or artistically*	Assessed at the local level				

Nebraska State Accountability - Reading (NeSA-R) Table of Specifications					
Grade 4					
Gr4 Vocabulary	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 4.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.					
LA 4.1.5.a *Apply knowledge of word structure elements, known words, and word patterns to determine meaning (e.g., parts of speech, plurals, possessives, suffixes, prefixes, base and root words)*	1	4-6	0	0	4-6
LA 4.1.5.b *Relate new grade level vocabulary to prior knowledge and use in new situations*	Assessed at the local level				
LA 4.1.5.c *Apply context clues (e.g., word, phrase, sentence and paragraph clues, re-reading) and text features (e.g., glossary, headings, subheadings, captions) to infer meaning of unknown words*	2	1-2	2-4	0	3-6
LA 4.1.5.d *Identify semantic relationships (e.g., patterns and categories, homographs, homophones, synonyms, antonyms, multiple meanings)*	1	4-6	0	0	4-6
LA 4.1.5.e *Determine meaning using print and digital reference materials (e.g., dictionary, thesaurus, glossary)*	Assessed at the local level				
Gr4 Comprehension	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 4.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.					
LA 4.1.6.a *Identify author purpose(s) (e.g., explain, entertain, inform, persuade) and recognize how author perspective (e.g., beliefs, assumptions, biases) influences text*	3	0	0-1	1-2	1-3
LA 4.1.6.b *Identify and analyze elements of narrative text (e.g., character development, setting, plot, theme)*	2	2-3	2-3	0	4-6
LA 4.1.6.c *Summarize narrative text including characters, setting, and plot with supporting details*	2	1-2	2-4	0	3-6
LA 4.1.6.d *Identify literary devices and explain the ways in which language is used (e.g., simile, metaphor, alliteration, onomatopoeia, imagery, rhythm)*	2	1-2	1-2	0	2-4

LA 4.1.6.e *Retell and summarize the main idea from informational text using supporting details*	2	1-2	2-4	0	3-6
LA 4.1.6.f *Recognize and apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare/contrast, fact/opinion)*	2	1-2	2-4	0	3-6
LA 4.1.6.g *Apply knowledge of text features to locate information and gain meaning from a text (e.g., glossary, maps, charts, tables, graphs, illustrations, headings, subheadings, captions, font/format styles)*	2	1-3	2-3	0	3-6
LA 4.1.6.h *Describe the defining characteristics of narrative and informational genres (e.g., folk tales, poetry, historical fiction, biographies, chapter books, textbooks)*	2	0	1-3	0	1-3
LA 4.1.6.i *Use narrative or informational text to develop a multi-cultural perspective*	Assessed at the local level				
LA 4.1.6.j *Generate and/or answer literal, inferential, critical, and interpretive questions, supporting answers using prior knowledge and literal and inferential information from the text*	3	1-2	1-2	1-2	3-6
LA 4.1.6.k *Identify and explain purpose for reading (e.g., information, pleasure, understanding)*	Assessed at the local level				
LA 4.1.6.l *Build and activate prior knowledge in order to identify text to self, text to text, and text to world connections before, during, and after reading*	Assessed at the local level				
LA 4.1.6.m *Self-monitor comprehension by recognizing when meaning is disrupted and apply strategies to clarify, confirm, or correct*	Assessed at the local level				
LA 4.1.6.n *Make and confirm/modify predictions before, during, and after reading (e.g., title, topic sentences, font, key words, foreshadowing clues)*	Assessed at the local level				
LA 4.1.6.o *Use examples and details in a text to make inferences about a story or situation*	Assessed at the local level				
LA 4.1.6.p *Respond to text verbally, in writing, or artistically*	Assessed at the local level				

Nebraska State Accountability - Reading (NeSA-R) Table of Specifications					
Grade 5					
Gr5 Vocabulary	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 5.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.					
LA 5.1.5.a *Apply knowledge of word structure elements, known words, and word patterns to determine meaning (e.g., affixes, abbreviations, parts of speech, word origins)*	1	4-6	0	0	4-6
LA 5.1.5.b *Relate new grade level vocabulary to prior knowledge and use in new situations*	Assessed at the local level				
LA 5.1.5.c *Select and apply context clues (e.g., word, phrase, sentence and paragraph clues, re-reading) and text features (e.g., glossary, headings, subheadings, captions, maps) to determine meaning of unknown words in a variety of text structures*	2	1-2	3-4	0	4-6
LA 5.1.5.d *Identify semantic relationships (e.g., multiple meanings, metaphors, similes, idioms, analogies)*	1	2-4	0	0	2-4
LA 5.1.5.e *Determine meaning using print and digital reference materials (e.g., dictionary, thesaurus, glossary)*	Assessed at the local level				
Gr5 Comprehension	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 5.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.					
LA 5.1.6.a *Identify author purpose(s) (e.g., explain, entertain, inform, persuade) and recognize how author perspective (e.g., beliefs, assumptions, biases) influences text*	3	0	0-1	1-2	1-3
LA 5.1.6.b *Identify and analyze elements of narrative text (e.g., character development, setting, plot, theme)*	2	1-2	2-4	0	3-6
LA 5.1.6.c *Summarize narrative text including characters, setting, plot, and theme with supporting details*	2	1-2	3-4	0	4-6
LA 5.1.6.d *Identify literary devices and explain the ways in which language is used (e.g., simile, metaphor, alliteration, onomatopoeia, imagery, rhythm)*	2	1-2	1-2	0	2-4

LA 5.1.6.e *Summarize and analyze the main idea from informational text using supporting details*	2	1-2	3-4	0	4-6
LA 5.1.6.f *Understand and apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare/contrast, fact/opinion)*	2	1-2	2-4	0	3-6
LA 5.1.6.g *Apply knowledge of text features to locate information and gain meaning from a text (e.g., index, maps, charts, tables, graphs, headings, subheadings)*	2	1-2	1-2	0	2-4
LA 5.1.6.h *Describe the defining characteristics of narrative and informational genres (e.g., textbooks, myths, fantasies, science fiction, drama, periodicals, essays)*	2	0	1-3	0	1-3
LA 5.1.6.i *Recognize the social, historical, cultural, and biographical influences in a variety of genres*	Assessed at the local level				
LA 5.1.6.j *Use narrative and informational text to develop a national and globalmulti-cultural perspective*	Assessed at the local level				
LA 5.1.6.k *Generate and/or answer literal, inferential, critical, and interpretive questions, supporting answers using prior knowledge and literal and inferential information from the text and additional sources*	3	1-2	2-4	1-2	4-8
LA 5.1.6.l *Select text for a particular purpose (e.g., information, pleasure, answer a specific question)*	Assessed at the local level				
LA 5.1.6.m *Build and activate prior knowledge in order to identify text to self, text to text, and text to world connections before, during, and after reading*	Assessed at the local level				
LA 5.1.6.n *Self-monitor comprehension by recognizing when meaning is disrupted and apply strategies to clarify, confirm, or correct*	Assessed at the local level				
LA 5.1.6.o *Use examples and details to make inferences or logical predictions while previewing and reading text*	Assessed at the local level				
LA 5.1.6.p *Respond to text verbally, in writing, or artistically*	Assessed at the local level				

Nebraska State Accountability - Reading (NeSA-R)
Table of Specifications

Grade 6

Gr6 Vocabulary	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
LA 6.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.					
LA 6.1.5.a *Determine the meaning of words through structural analysis, using knowledge of Greek, Latin, and Anglo Saxon roots, prefixes, and suffixes to understand complex words, including words in science, mathematics, and social studies*	1	4-6	0	0	4-6
LA 6.1.5.b *Relate new grade level vocabulary to prior knowledge and use in new situations*	Assessed at the local level				
LA 6.1.5.c *Select and apply knowledge of context clues (e.g., word, phrase, sentence and paragraph clues, re-reading) and text features (e.g., glossary, headings, subheadings, index, tables, maps, charts) to determine meaning of unknown words in a variety of text structures*	2	1-2	3-4	0	4-6
LA 6.1.5.d *Identify semantic relationships (e.g., metaphors, similes, idioms, analogies, comparisons)*	1	2-4	0	0	2-4
LA 6.1.5.e *Determine meaning using print and digital reference materials (e.g., dictionary, thesaurus, glossary)*	Assessed at the local level				
Gr6 Comprehension	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
LA 6.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.					
LA 6.1.6.a *Explain how author's purpose and perspective affect the meaning and reliability of the text*	3	0	1-2	1-2	2-4
LA 6.1.6.b *Identify and analyze elements of narrative text (e.g., character development, setting, plot development, conflict, point of view, theme)*	2	1-3	2-3	0	3-6
LA 6.1.6.c *Summarize narrative text using understanding of characters, setting, sequence of events, plot, and theme*	2	1-2	2-4	0	3-6

LA 6.1.6.d *Interpret and explain the author's use of literary devices (e.g., simile, metaphor, alliteration, onomatopoeia, imagery, rhythm)*	3	0	1-2	1-2	2-4
LA 6.1.6.e *Summarize, analyze, and synthesize informational text using main idea and supporting details*	3	1-2	1-2	2-3	4-7
LA 6.1.6.f *Apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare/contrast, fact/opinion)*	2	1-2	2-4	0	3-6
LA 6.1.6.g *Apply knowledge of text features to locate information and gain meaning from a text (e.g., index, maps, charts, tables, graphs, headings, subheadings)*	2	1-2	1-2	0	2-4
LA 6.1.6.h *Distinguish between the defining characteristics of different narrative and informational genres (e.g., textbooks, myths, fantasies, science fiction, drama, periodicals, and essays)*	2	0	1-3	0	1-3
LA 6.1.6.i *Describe the social, historical, cultural, and biographical influences in a variety of genres*	Assessed at the local level				
LA 6.1.6.j *Use narrative and informational text to develop a national and global multi-cultural perspective*	Assessed at the local level				
LA 6.1.6.k *Generate and/or answer literal, inferential, critical, and interpretive questions, supporting answers using prior knowledge and literal and inferential information from the text and additional sources*	3	1-2	2-4	1-2	4-8
LA 6.1.6.l *Select text for a particular purpose (e.g., information, pleasure, answer a specific question)*	Assessed at the local level				
LA 6.1.6.m *Build and activate prior knowledge in order to identify text to self, text to text, and text to world connections before, during, and after reading*	Assessed at the local level				
LA 6.1.6.n *Self-monitor comprehension for accuracy and understanding when errors detract from meaning by applying appropriate strategies to self-correct*	Assessed at the local level				
LA 6.1.6.o *Use examples and details to make inferences or logical predictions while previewing and reading text*	Assessed at the local level				
LA 6.1.6.p *Respond to text verbally, in writing, or artistically*	Assessed at the local level				

Nebraska State Accountability - Reading (NeSA-R) Table of Specifications					
Grade 7					
Gr7 Vocabulary	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 7.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.					
LA 7.1.5.a *Determine meaning of words through structural analysis, using knowledge of Greek, Latin, and Anglo-Saxon roots, prefixes, and suffixes to understand complex words, including words in science, mathematics, and social studies*	1	3-5	0	0	3-5
LA 7.1.5.b *Relate new grade level vocabulary to prior knowledge and use in new situations.*	Assessed at the local level				
LA 7.1.5.c *Select and apply knowledge of context clues (e.g., word, phrase, sentence and paragraph clues, re-reading) and text features (e.g., glossary, headings, subheadings, index, tables, maps, graphs, charts) appropriate to a particular text to determine meaning of unknown words*	2	1-2	3-5	0	4-7
LA 7.1.5.d *Analyze semantic relationships (e.g., figurative language, connotations, subtle distinctions)*	2	1-2	1-2	0	2-4
LA 7.1.5.e *Determine meaning using print and digital reference materials*	Assessed at the local level				
Gr7 Comprehension	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 7.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension					
LA 7.1.6.a *Analyze the meaning, reliability, and validity of the text considering author's purpose and perspective*	3	0	1-2	1-2	2-4
LA 7.1.6.b *Identify and analyze elements of narrative text (e.g., character development, setting, plot development, conflict, point of view, theme)*	2	2-4	2-4	0	4-8
LA 7.1.6.c *Analyze author's use of literary devices (e.g., foreshadowing, personification, idiom, oxymoron, hyperbole, flashback, suspense, symbolism, irony)*	3	0	1-2	1-2	2-4
LA 7.1.6.d *Summarize, analyze, and synthesize informational text using main idea and supporting details*	3	0	2-3	2-3	4-6

LA 7.1.6.e *Apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare/contrast, fact/opinion, proposition/support)*	2	1-2	2-4	0	3-6
LA 7.1.6.f *Apply knowledge of text features to locate information and gain meaning from a text (e.g., index, annotations, maps, charts, tables, graphs, headings, subheadings)*	2	1-2	1-2	0	2-4
LA 7.1.6.g *Explain and make inferences based on the characteristics of narrative and informational genres (e.g., textbooks, myths, fantasies, science fiction, drama, periodicals, essays)*	2	0	1-3	0	1-3
LA 7.1.6.h *Explain the social, historical, cultural, and biographical influences in a variety of genres*	Assessed at the local level				
LA 7.1.6.i *Use narrative and informational text to develop a national and global multi-cultural perspective*	Assessed at the local level				
LA 7.1.6.j *Generate and/or answer literal, inferential, critical, and interpretive questions, analyzing prior knowledge, information from the text and additional sources, to support answers*	3	2-3	2-3	1-2	5-8
LA 7.1.6.k *Select text for a particular purpose (e.g., understand, interpret, enjoy, solve problems, form an opinion, answer a specific question, discover models for own writing)*	Assessed at the local level				
LA 7.1.6.l *Build and activate prior knowledge in order to clarify text, deepen understanding, and make connections while reading*	Assessed at the local level				
LA 7.1.6.m *Self-monitor comprehension for accuracy and understanding when errors detract from meaning by applying appropriate strategies to self-correct*	Assessed at the local level				
LA 7.1.6.n *Use examples and details to make inferences or logical predictions while previewing and reading text*	Assessed at the local level				
LA 7.1.6.o *Respond to text verbally, in writing, or artistically*	Assessed at the local level				

Nebraska State Accountability - Reading (NeSA-R)
Table of Specifications

Grade 8

Gr8 Vocabulary	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
LA 8.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.					
LA 8.1.5.a *Determine meaning of words through structural analysis, using knowledge of Greek, Latin, and Anglo-Saxon roots, prefixes, and suffixes to understand complex words, including words in science, mathematics, and social studies*	1	3-5	0	0	3-5
LA 8.1.5.b *Relate new grade level vocabulary to prior knowledge and use in new situations*	Assessed at the local level				
LA 8.1.5.c *Select a context clue strategy to determine meaning of unknown word appropriate to text (e.g., restatement, example, gloss, annotations, sidebar)*	2	1-3	3-5	0	4-8
LA 8.1.5.d *Analyze semantic relationships (e.g., figurative language, connotations, subtle distinctions)*	2	1-2	1-2	0	2-4
LA 8.1.5.e *Determine meaning using print and digital reference materials*	Assessed at the local level				
Gr8 Comprehension	**DOK Level**	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 8.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension					
LA 8.1.6.a *Analyze the meaning, reliability, and validity of the text considering author's purpose, perspective, and information from additional sources*	3	0	0-1	1-2	1-3
LA 8.1.6.b *Identify and analyze elements of narrative text (e.g., character development, setting, plot development, conflict, point of view, inferred and recurring themes)*	2	1-2	3-5	0	4-7
LA 8.1.6.c *Analyze author's use of literary devices (e.g., foreshadowing, personification, idiom, oxymoron, hyperbole, flashback, suspense, symbolism, irony, transitional devices)*	3	0	1-2	1-2	2-4
LA 8.1.6.d *Summarize, analyze, and synthesize informational text using main idea and supporting details*	3	0	3-5	2-3	5-8

LA 8.1.6.e *Apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare / contrast, fact / opinion, proposition / support)*	2	0	4-6	0	4-6
LA 8.1.6.f *Analyze and evaluate information from text features (e.g., index, annotations, maps, charts, tables, graphs, headings, subheadings, lists)*	2	1-2	1-2	0	2-4
LA 8.1.6.g *Analyze and make inferences based on the characteristics of narrative and informational genres*	2	1-2	1-2	0	2-4
LA 8.1.6.h *Analyze a variety of genres for the social, historical, cultural, and biographical influences*	Assessed at the local level				
LA 8.1.6.i *Use narrative and informational text to develop a national and global multi-cultural perspective*	Assessed at the local level				
LA 8.1.6.j *Generate and/or answer literal, inferential, critical, and interpretive questions, analyzing and synthesizing prior knowledge, information from the text and additional sources, to support answers*	3	1-2	2-3	1-2	4-7
LA 8.1.6.k *Select text for a particular purpose (e.g., understand, interpret, enjoy, solve problems, form an opinion, answer a specific question, discover models for own writing)*	Assessed at the local level				
LA 81.6.l *Build and activate prior knowledge in order to clarify text, deepen understanding, and make connections while reading*	Assessed at the local level				
LA 8.1.6.m *Self-monitor comprehension for accuracy and understanding when errors detract from meaning by applying appropriate strategies to self-correct*	Assessed at the local level				
LA 8.1.6.n *Make complex or abstract inferences or predictions by synthesizing information while previewing and reading text*	Assessed at the local level				
LA 8.1.6.o *Respond to text verbally, in writing, or artistically*	Assessed at the local level				

Nebraska State Accountability - Reading (NeSA-R)
Table of Specifications

Grade 11

Gr12 Vocabulary	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
LA 12.1.5 Vocabulary: Students will build literary, general academic, and content specific grade level vocabulary.					
LA 12.1.5.a *Determine meaning of words through structural analysis, using knowledge of Greek, Latin, and Anglo-Saxon roots, prefixes, and suffixes to understand complex words, including words in science, mathematics, and social studies*	1	2-4	0	0	2-4
LA 12.1.5.b *Relate new grade level vocabulary to prior knowledge and use in new situations.*	Assessed at the local level				
LA 12.1.5.c *Independently apply appropriate strategy to determine meanings of unknown words in text*	2	1-2	2-4	0	3-6
LA 12.1.5.d *Use semantic relationships to evaluate, defend, and make judgments*	3	0	1-2	1-2	2-4
LA 12.1.5.e *Determine meaning using print and digital reference materials*	Assessed at the local level				
Gr12 Comprehension	**DOK Level**	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
LA 12.1.6 Comprehension: Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.					
LA 12.1.6.a *Evaluate the meaning, reliability, and validity of the text considering author's purpose, perspective, and information from additional sources*	3	0	1-2	1-2	2-4
LA 12.1.6.b *Analyze and evaluate elements of narrative text (e.g., characterization, setting, plot development, internal and external conflict, inferred and recurring themes, point of view, tone, mood)*	3	0	2-3	1-2	3-5
LA 12.1.6.c *Analyze the function and critique the effects of the author's use of stylistic and literary devices (e.g., allusion, symbolism, irony, foreshadowing, flashback, metaphor, personification, epiphany, oxymoron, dialect, tone, mood, transitional devices)*	3	0	2-3	1-2	3-5

LA 12.1.6.d *Summarize, analyze, synthesize, and evaluate informational text*	3	0	3-4	2-3	5-7
LA 12.1.6.e *Apply knowledge of organizational patterns found in informational text (e.g., sequence, description, cause and effect, compare/contrast, fact/opinion, proposition/support, concept definition, question/answer)*	2	1-2	3-6	0	4-8
LA 12.1.6.f *Analyze and evaluate information from text features (e.g., index, annotations, photographs, charts, tables, graphs, headings, subheadings, lists)*	2	1-2	1-2	0	2-4
LA 12.1.6.g *Analyze and evaluate inferences based on the characteristics of narrative and informational genres and provide evidence from the text to support understanding*	3	1-2	1-2	0	2-4
LA 12.1.6.h *Critique the effects of historical, cultural, political, and biographical influences in a variety of genres*	Assessed at the local level				
LA 12.1.6.i *Use narrative and informational text to develop a national and global multi-cultural perspective*	Assessed at the local level				
LA 12.1.6.j *Generate and/or answer literal, inferential, critical, and interpretive questions, analyzing, synthesizing, and evaluating prior knowledge, information from the text*	3	1-2	2-3	1-2	4-7
LA 12.1.6.k *Select a text for a particular purpose (e.g., understand a specific viewpoint, enjoy, solve problems, form an opinion, discover models for own writing, predict outcomes,*	Assessed at the local level				
LA 12.1.6.l *Build and activate prior knowledge in order to clarify text, deepen understanding, and make connections while reading*	Assessed at the local level				
LA 12.1.6.m *Self-monitor comprehension for accuracy and understanding when errors detract from meaning by applying appropriate strategies to self-correct*	Assessed at the local level				
LA 12.1.6.n *Make complex or abstract inferences or predictions by synthesizing information while previewing and reading text*	Assessed at the local level				
LA 12.1.6.o *Respond to text verbally, in writing, or artistically*	Assessed at the local level				

Appendix C: NeSA-M Test Blueprint

Nebraska State Accountability - Mathematics (NeSA-M) Table of Specifications					
Grade 3					
NUMBER SENSE					
Gr3 Number System	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.1.1 Students will represent and show relationships among positive rational numbers within the base-ten number system.					
MA 3.1.1.a Read and write numbers to one-hundred thousand.	Assessed at the local level				
MA 3.1.1.b Count by multiples of 5 to 200	Assessed at the local level				
MA 3.1.1.c Count by multiples of 10 to 400	Assessed at the local level				
MA 3.1.1.d Count by multiples of 100 to 1000	Assessed at the local level				
MA 3.1.1.e Demonstrate multiple equivalent representations for numbers up to 10,000	1	3-5	0	0	3-5
MA 3.1.1.f Demonstrate multiple equivalent representations for decimals numbers through the tenths place.	Assessed at the local level				
MA 3.1.1.g Compare and order whole numbers through the thousands	1	4-6	0	0	4-6
MA 3.1.1.h Find parts of whole and parts of a set for 1/2, 1/3, or 1/4	2	0-1	3-5	0	3-6
MA 3.1.1.i Round a given number to tens, hundreds, or thousands	1	1-3	0	0	1-3
Gr3 Operations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.1.2 Students demonstrate the meaning of multiplication with whole numbers.					
MA 3.1.2.a Represent multiplication as repeated addition using objects, drawings, words, and symbols	2	0-1	1-2	0	1-3
MA 3.1.2.b Use objects, drawings, words, and symbols to explain the relationship between multiplication and division	Assessed at the local level				
MA.3.1.2.c Use drawings, words and symbols to explain the meaning of the factors and product in a multiplication sentence	Assessed at the local level				
MA.3.1.2.d Use drawings, words, and symbols to explain the meaning of multiplication using an array	2	0-1	1-2	0	1-3
Gr3 Computation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.1.3 Students will compute fluently and accurately using appropriate strategies and tools.					

MA 3.1.3.a Compute whole number multiplication facts 0-10 fluently	Assessed at the local level				
MA 3.1.3.b Add and subtract through four-digit whole numbers with regrouping	Assessed at the local level				
MA 3.1.3.c Select and apply the appropriate methods of computation when problem solving with four-digit whole numbers through the thousands	Assessed at the local level				
Gr3 Estimation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.1.4 Students will estimate and check reasonableness of answers using appropriate strategies and tools.					
MA 3.1.4.a Estimate the two-digit product of whole number multiplication and check the reasonableness	Assessed at the local level				
GEOMETRIC/MEASUREMENT CONCEPTS					
Gr3 Characteristics	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.2.1 Students will identify characteristics and describe properties of two-dimensional shapes and three-dimensional objects.					
MA 3.2.1.a Identify the number of sides, angles, and vertices of two-dimensional shapes	1	2-4	0	0	2-4
MA 3.2.1.b Identify congruent two-dimensional figures given multiple two-dimensional shapes	1	1-2	0	0	1-2
MA 3.2.1.c Identify lines, line segments, rays, and angles	Assessed at the local level				
MA 3.2.1.d Describe attributes of solid shapes	Assessed at the local level				
Gr3 Coordinate Geometry	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.2.2 Students will identify distances on a number line.					
MA 3.2.2.a Draw a number line and plot points	Assessed at the local level				
MA 3.2.2.b Determine the distance between two whole number points on a number line	1	1-3	0	0	1-3
Gr3 Transformations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.2.3 Students will draw all lines of symmetry.					
MA 3.2.3.a Draw all possible lines of symmetry in two-dimensional shapes	Assessed at the local level				
Gr3 Spatial Modeling	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.2.4 Students will create two-dimensional shapes and three-dimensional objects.					
MA 3.2.4.a Sketch and label lines, rays, line segments, and angles	Assessed at the local level				

MA 3.2.4.b Build three-dimensional objects	Assessed at the local level				
Gr3 Measurement	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.2.5 Students will apply appropriate procedures and tools to determine measurements using customary and metric units.					
3.2.5.a Select and use appropriate tools to measure perimeter of simple two-dimensional shapes	Assessed at the local level				
MA 3.2.5.b Count mixed coins and bills greater than $1.00	Assessed at the local level				
MA 3.2.5.c Identify time of day	Assessed at the local level				
MA 3.2.5.d State multiple ways for the same time using 15 minute intervals	Assessed at the local level				
MA 3.2.5.e Identify the appropriate customary unit for measuring length, weight, and capacity/volume	1	2-4	0	0	2-4
MA 3.2.5.f Measure length to the nearest 1/2 inch and centimeter	Assessed at the local level				
MA 3.2.5.g Compare and order objects according to length using centimeters and meters	1	1-3	0	0	1-3
ALGEBRAIC CONCEPTS					
Gr3 Relationships	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.3.1 Students will represent relationships.					
MA 3.3.1.a Identify, describe, and extend numeric and non-numeric patterns	1	1-3	0	0	1-3
MA 3.3.1.b Identify patterns using words, tables, and graphs	Assessed at the local level				
Gr3 Modeling in Context	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.3.2 Students will create and use models to represent mathematical situations.					
MA 3.3.2.a Model situations that involve the addition and subtraction of whole numbers using objects, number lines, and symbols	3	0	1-2	1-2	2-4
MA 3.3.2.b Describe and model quantitative change involving subtraction	Assessed at the local level				
Gr3 Procedures	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.3.3 Students will identify and apply properties of whole numbers to solve equations involving addition and subtraction.					
MA 3.3.3.a Use symbolic representation of the identity property of addition	Assessed at the local level				
MA 3.3.3.b Solve simple one-step whole number equations involving addition and subtraction	1	2-4	0	0	2-4

MA 3.3.3.c Explain the procedure(s) used in solving simple one-step whole number equations involving addition and subtraction	Assessed at the local level				
DATA ANALYSIS/PROBABILITY CONCEPTS					
Gr3 Display and Analysis	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.4.1 Students will organize, display, compare, and interpret data.					
MA 3.4.1.a Represent data using horizontal and vertical bar graphs	2	0-1	1-2	0	1-3
MA 3.4.1.b Use comparative language to describe the data	Assessed at the local level				
MA 3.4.1.c Interpret data using horizontal and vertical bar graphs	2	0-1	1-2	0	1-3
Gr3 Predictions and Inferences	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.4.2 Mastery not expected at this level					
Gr3 Probability	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 3.4.3 Students will find and describe experimental probability.					
MA 3.4.3.a Perform simple experiments and describe outcomes as possible, impossible, or certain	Assessed at the local level				

Nebraska State Accountability - Mathematics (NeSA-M)
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Grade 4

NUMBER SENSE

Gr4 Number System	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 4.1.1 Students will represent and show relationships among positive rational numbers within the base-ten number system.					
MA 4.1.1.a Read and write numbers through the millions	Assessed at the local level				
MA 4.1.1.b Demonstrate multiple equivalent representations for decimal numbers through the hundredths place	2	0-1	2-3	0	2-4
MA 4.1.1.c Compare and order whole numbers and decimals through the hundredths place	1	2-4	0	0	2-4
MA 4.1.1.d Classify a number as even or odd	Assessed at the local level				
MA 4.1.1.e Represent a fraction as parts of a whole, and/or parts of a set	2	0-1	1-2	0	1-3
MA 4.1.1.f Use visual models to find equivalent fractions	1	1-3	0	0	1-3
MA 4.1.1.g Determine the size of a fraction relative to one half using equivalent forms	Assessed at the local level				
MA 4.1.1.h Locate fractions on a number line	1	1-3	0	0	1-3
MA 4.1.1.i Round a whole number to millions	Assessed at the local level				
Gr4 Operations	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 4.1.2 Students will demonstrate the meaning of division with whole numbers.					
MA 4.1.2.a Use drawings, words, and symbols to explain the meaning of division	2	0-1	1-2	0	1-3
Gr4 Computation	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
4.1.3 Students will compute fluently and accurately using appropriate strategies and tools.					
MA 4.1.3.a Compute whole number division facts 0-10 fluently	Assessed at the local level				
MA 4.1.3.b Add and subtract decimals to the hundredth place	1	1-2	0	0	1-2
MA 4.1.3.c Multiply two-digit whole numbers	1	1-3	0	0	1-3

MA 4.1.3.d Divide a three-digit number by a one digit divisor with and without a remainder	Assessed at the local level				
MA 4.1.3.e Mentally compute multiplication and division involving powers of 10	1	1-3	0	0	1-3
MA 4.1.3.f Select and apply the appropriate method of computation when problem solving	2	0-1	3-4	0	3-5
Gr4 Estimation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
4.1.4 Students will estimate and check reasonableness of answers using appropriate strategies and tools.					
MA 4.1.4.a Estimate the three-digit product and the two-digit quotient of whole number multiplication and division and check the reasonableness	Assessed at the local level				
GEOMETRIC/MEASUREMENT CONCEPTS					
Gr4 Characteristics	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.2.1 Students will classify two-dimensional shapes and three-dimensional objects.					
MA 4.2.1.a Identify two- and three- dimensional shapes according to their sides and angle properties	2	0-1	2-3	0	2-4
MA 4.2.1.b Classify an angle as acute, obtuse, and right	2	0-1	1-2	0	1-3
MA 4.2.1.c Identify parallel, perpendicular, and intersecting lines	1	1-2	0	0	1-2
MA 4.2.1.d Identify the property of congruency when dealing with plane geometric shapes	Assessed at the local level				
Gr4 Coordinate Geometry	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.2.2 Students will describe locations using coordinate geometry.					
MA 4.2.2.a Identify the ordered pair of a plotted point in first quadrant by its location	1	1-2	0	0	1-2
Gr4 Transformations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.2.3 Students will identify simple transformations.					
MA 4.2.3.a Given two congruent geometric shapes, identify the transformation applied to an original shape to create a transformed shape	Assessed at the local level				
Gr4 Spatial Modeling	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.2.4 Students will use geometric models to solve problems.					

MA 4.2.4.a Given a geometric model, use it to solve a problem	Assessed at the local level				
Gr4 Measurement	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.2.5 Students will apply appropriate procedures and tools to estimate and determine measurement using customary units and metric units.					
MA 4.2.5.a Select and use appropriate tools to measure perimeter of polygons	Assessed at the local level				
MA 4.2.5.b Identify time to the minute on an analog clock	2	0-1	1-2	0	1-3
MA 4.2.5.c Solve problems involving elapsed time	2	0-1	1-2	0	1-3
MA 4.2.5.d Identify the appropriate metric unit for measuring length, weight, and capacity/volume	1	2-4	0	0	2-4
MA 4.2.5.e Estimate and measure length using customary and metric units	Assessed at the local level				
MA 4.2.5.f Measure weight and temperature using customary units	Assessed at the local level				
MA 4.2.5.g Compute simple unit conversions for length within a system of measurement	2	0-1	1-2	0	1-3
ALGEBRAIC CONCEPTS					
Gr4 Relationships	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.3.1 Students will represent and analyze relationships.					
MA 4.3.1.a Describe, extend, and apply rules about numeric patterns	Assessed at the local level				
MA 4.3.1.b Represent and analyze a variety of patterns using words, tables, and graphs	Assessed at the local level				
MA 4.3.1.c Use ≤ and ≥ symbols to compare quantities	2	0-1	1-2	0	1-3
MA 4.3.1.d Select appropriate operational and relational symbols to make a number sentence true	2	0-1	1-2	0	1-3
Gr4 Modeling in Context	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.3.2 Students will create and use models to represent mathematical situations.					
MA 4.3.2.a Model situations that involve the multiplication of whole numbers using number lines and symbols	Assessed at the local level				
MA 4.3.2.b Describe and model quantitative change involving quantitative change involving multiplication	Assessed at the local level				
Gr4 Procedures	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**

MA 4.3.3 Students will identify and apply properties of whole numbers to solve equations involving multiplication and division.					
MA 4.3.3.a Represent the idea of a variable as an unknown quantity using a letter or a symbol	Assessed at the local level				
MA 4.3.3.b Use symbolic representation of the identity property of multiplication	Assessed at the local level				
MA 4.3.3.c Use symbolic representations of the commutative property of multiplication	1	1-3	0	0	1-3
MA 4.3.3.d Solve simple one-step whole number equations	1	2-4	0	0	2-4
MA 4.3.3.e Explain the procedures(s) used in solving simple one-step whole number equations	Assessed at the local level				
DATA ANALYSIS/PROBABILITY CONCEPTS					
Gr4 Display and Analysis	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.4.1 Students will organize, display, compare, and interpret data.					
MA 4.4.1.a Represent data using bar dot/line plots	Assessed at the local level				
MA 4.4.1.b Compare different representations of the same data	2	0-1	1-2	0	1-3
MA 4.4.1.c Interpret data and draw conclusions using dot/line plots	2	0-1	1-2	0	1-3
MA 4.4.1.d Find the mode and range for a set of whole numbers	Assessed at the local level				
MA 4.4.1.e Find the whole number mean for a set of whole numbers	Assessed at the local level				
Gr4 Predictions and Inferences	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.4.2 Students will construct predictions based on data.					
MA 4.4.2.a Make predictions based on data to answer questions from tables and bar graphs	2	0-1	1-2	0	1-3
Gr4 Probability	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 4.4.3 Students will find, describe, and compare experimental probabilities.					
MA 4.4.3.a Perform simple experiments and compare the degree of likelihood	Assessed at the local level				

Nebraska State Accountability - Mathematics (NeSA-M) Table of Specifications					
Grade 5					
NUMBER SENSE					
Gr5 Number System	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.1.1 Students will represent and show relationships among positive rational numbers.					
MA 5.1.1.a Demonstrate multiple equivalent representations for whole numbers and decimals through the thousandths place	2	0-1	2-3	0	2-4
MA 5.1.1.b Compare and order whole numbers, fractions, and decimals through the thousandths place	1	2-4	0	0	2-4
MA 5.1.1.c Identify and name fractions in their simplest form and find common denominators for fractions	1	2-4	0	0	2-4
MA 5.1.1.d Recognize and generate equivalent forms of commonly used fractions, decimals, and percents	2	0-1	2-3	0	2-4
MA 5.1.1.e Classify a number as prime or composite	1	1-2	0	0	1-2
MA 5.1.1.f Identify factors and multiples of any whole number	1	1-2	0	0	1-2
MA 5.1.1.g Round whole numbers and decimals to any given place	Assessed at the local level				
Gr5 Operations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.1.2 Students will demonstrate the meaning of arithmetic operations with whole numbers.					
MA 5.1.2.a Use words and symbols to explain the meaning of the identity properties for addition and multiplication	Assessed at the local level				
MA 5.1.2.b Use words and symbols to explain the meaning of the commutative and associative properties of addition and multiplication	Assessed at the local level				
MA 5.1.2.c Use words and symbols to explain the distributive property of multiplication over addition	2	0-1	1-2	0	1-3
Gr5 Computation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.1.3 Students will compute fluently and accurately using appropriate strategies and tools.					
MA 5.1.3.a Add and subtract positive rational numbers	1	2-4	0	0	2-4
MA 5.1.3.b Select, apply, and explain the appropriate method of computation when problem solving	2	0-1	3-4	0	3-5

MA 5.1.3.c Multiply decimals	1	1-3	0	0	1-3
MA 5.1.3.d Divide a decimal by a whole number	1	1-3	0	0	1-3
Gr5 Estimation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.1.4 Students will estimate and check reasonableness of answers using appropriate strategies and tools.					
MA 5.1.4.a Estimate the sums and differences of positive rational numbers to check the reasonableness of such results	2	0-1	1-2	0	1-3
GEOMETRIC/MEASUREMENT CONCEPTS					
Gr5 Characteristics	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.2.1 Students will describe relationships among two-dimensional shapes and three-dimensional objects.					
MA 5.2.1.a Identify the number of edges, faces, and vertices of triangular and rectangular prisms	1	1-3	0	0	1-3
MA 5.2.1.b Justify congruence of two-dimensional shapes	Assessed at the local level				
MA 5.2.1.c Justify the classification of two-dimensional shapes	Assessed at the local level				
MA 5.2.1.d Identify degrees on a circle	1	1-2	0	0	1-2
Gr5 Coordinate Geometry	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
5.2.2 Students will identify locations using coordinate geometry.					
MA 5.2.2.a Plot the location of an ordered pair in the first quadrant	1	1-2	0	0	1-2
Gr5 Transformations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.2.3 Students will identify simple transformations.					
MA 5.2.3.a Perform one-step transformations on two-dimensional shapes	Assessed at the local level				
Gr5 Spatial Modeling	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
5.2.4 Students will create and use geometric models to solve problems.					
MA 5.2.4.a Build or sketch a geometric model to solve a problem	Assessed at the local level				
MA 5.2.4.b Sketch congruent shapes	Assessed at the local level				
MA 5.2.4.c Build rectangular prisms using cubes	Assessed at the local level				
Gr5 Measurement	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**

MA 5.2.5 Students will apply appropriate procedures, tools, and formulas to determine measurements using customary units and metric units.					
MA 5.2.5.a Select and use appropriate tools to measure perimeter and angles	Assessed at the local level				
MA 5.2.5.b Identify correct unit (customary or metric) to the measurement situation	2	0-1	1-2	0	1-3
MA 5.2.5.c Estimate and measure length with customary units to the nearest 1/4 inch	Assessed at the local level				
MA 5.2.5.d Measure capacity/volume with customary units	Assessed at the local level				
MA 5.2.5.e Measure weight (mass) and temperature using metric units	Assessed at the local level				
MA 5.2.5.f Determine the area of rectangles and squares	2	0-1	1-2	0	1-3
ALGEBRAIC CONCEPTS					
Gr5 Relationships	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.3.1 Students will represent, analyze, and generalize relationships.					
MA 5.3.1.a Describe, extend, apply rules, and make generalizations about numeric and geometric patterns	Assessed at the local level				
MA 5.3.1.b Create and analyze numeric patterns using words, tables, and graphs	Assessed at the local level				
MA 5.3.1.c Communicate relationships using expressions and equations	Assessed at the local level				
Gr5 Modeling in Context	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.3.2 Students will create, use, and compare models representing mathematical situations.					
MA 5.3.2.a Model situations that involve the addition, subtraction, and multiplication of positive rational numbers using words, graphs, and tables	2	0-1	1-2	0	1-3
MA 5.3.2.b Represent a variety of quantitative relationships using tables and graphs	Assessed at the local level				
MA 5.3.2.c Compare different models to represent mathematical situations	Assessed at the local level				
Gr5 Procedures	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.3.3 Students will apply properties of simple positive rational numbers to solve one-step equations.					
MA 5.3.3.a Explain the addition property of equality	Assessed at the local level				

MA 5.3.3.b Use symbolic representations of the associative property	2	0	1-2	0	1-2
MA 5.3.3.c Evaluate numerical expressions by using parentheses with respect to order of operations	1	2-4	0	0	2-4
MA 5.3.3.d Evaluate simple algebraic expressions involving addition and subtraction	2	0	1-2	0	1-2
MA 5.3.3.e Solve one-step addition and subtraction equations involving common positive rational numbers	1	1-2	0	0	1-2
MA 5.3.3.f Identify and explain the properties of equality used in solving one-step equations involving common positive rational numbers	Assessed at the local level				
DATA ANALYSIS/PROBABILITY CONCEPTS					
Gr5 Display and Analysis	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.4.1 Students will organize, display, compare, and interpret data.					
MA 5.4.1.a Represent data using line plots	2	0	1-2	0	1-2
MA 5.4.1.b Represent the same set of data in different formats	2	0-1	1-2	0	1-3
MA 5.4.1.c Draw conclusions based on a set of data	3	0	0-1	1-2	1-3
MA 5.4.1.d Find the mean, median, mode, and range for a set of whole numbers	Assessed at the local level				
MA 5.4.1.e Generate questions and answers from data sets and their graphical representations	Assessed at the local level				
Gr5 Predictions and Inferences	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.4.2 Students will construct predictions based on data.					
MA 5.4.2.a Make predictions based on data to answer questions from tables, bar graphs, and line graphs	Assessed at the local level				
Gr5 Probability	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 5.4.3 Students will determine theoretical probabilities.					
MA 5.4.3.a Perform and record results of probability experiments	Assessed at the local level				
MA 5.4.3.b Generate a list of possible outcomes for a simple event	1	1-3	0	0	1-3
MA 5.4.3.c Explain the likelihood of an event that can be represented by a number from 0 to 1	1	1-3	0	0	1-3

Nebraska State Accountability - Mathematics (NeSA-M) Table of Specifications					
Grade 6					
NUMBER SENSE					
Gr6 Number System	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.1.1 Students will represent and show relationships among positive rational numbers and integers.					
MA 6.1.1.a Show equivalence among common fractions and non-repeating decimals and percents	Assessed at the local level				
MA 6.1.1.b Compare and order positive and negative integers	1	1-3	0	0	1-3
MA 6.1.1.c Identify integers less than 0 on a number line	Assessed at the local level				
MA 6.1.1.d Represent large numbers using exponential notation	1	1-2	0	0	1-2
MA 6.1.1.e Identify the prime factorization of numbers	1	1-3	0	0	1-3
MA 6.1.1.f Classify numbers as natural, whole, or integer	Assessed at the local level				
Gr6 Operations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.1.2 Students will demonstrate the meaning of arithmetic operations with positive fractions and decimals.					
MA 6.1.2.a Use drawings, words, and symbols to explain the meaning of addition and subtraction of fractions	2	0-1	1-3	0	1-4
MA 6.1.2.b Use drawings, words and symbols to explain the meaning of addition and subtraction of decimals	2	0-1	1-3	0	1-4
Gr6 Computation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.1.3 Students will compute fluently and accurately using appropriate strategies and tools.					
MA 6.1.3.a Multiply and divide positive rational numbers	1	1-3	0	0	1-3
MA 6.1.3.b Select and apply the appropriate method of computation when problem solving	2	0-1	2-3	0	2-4
Gr6 Estimation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**

MA 6.1.4 Students will estimate and check reasonableness of answers using appropriate strategies and tools.					
MA 6.1.4.a Use appropriate estimation methods to check the reasonableness of solutions for problems involving positive rational numbers	2	0-1	1-2	0	1-3
GEOMETRIC/MEASUREMENT CONCEPTS					
Gr6 Characteristics	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.2.1 Students will compare and contrast properties among two-dimensional shapes and three-dimensional objects.					
MA 6.2.1.a Justify the classification of three-dimensional objects	Assessed at the local level				
Gr6 Coordinate Geometry	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.2.2 Students will label points using coordinate geometry.					
MA 6.2.2.a Identify the ordered pair of a plotted point in the coordinate plane	1	1-3	0	0	1-3
Gr6 Transformations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.2.3 Students will use and describe results of transformations on geometric shapes.					
MA 6.2.3.a Perform and describe positions and orientation of shapes under single transformations not on a coordinate plane	Assessed at the local level				
Gr6 Spatial Modeling	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.2.4 Students will use visualization of geometric models to solve problems.					
MA 6.2.4.a Identify two-dimensional drawings of three-dimensional objects	2	1-2	1-2	0	2-4
Gr6 Measurement	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.2.5 Students will apply appropriate procedures, tools, and formulas to determine measurements.					
MA 6.2.5.a Estimate and measure length with customary and metric units to the nearest 1/16 inch and mm	Assessed at the local level				
MA 6.2.5.b Measure volume/capacity using the metric system	Assessed at the local level				
MA 6.2.5.c Convert length, weight, and liquid capacity from one unit to another within the same system	Assessed at the local level				
MA 6.2.5.d Determine the perimeter of polygons	2	1-2	1-2	0	2-4

MA 6.2.5.e Determine the area of parallelograms and triangles	2	1-2	1-2	0	2-4
MA 6.2.5.f Determine the volume of rectangular prisms	2	1-2	1-2	0	2-4
ALGEBRAIC CONCEPTS					
Gr6 Relationships	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.3.1 Students will represent, analyze, and use relationships to make generalizations.					
MA 6.3.1.a Describe and create simple algebraic expressions from words and tables	2	0-1	1-2	0	1-3
MA 6.3.1.b Use a variable to describe a situation with an equation	2	0-1	1-2	0	1-3
MA 6.3.1.c Identify relationships as increasing, decreasing, or constant	Assessed at the local level				
Gr6 Modeling in Context	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.3.2 Students will create, use, and interpret models of quantitative relationships.					
MA 6.3.2.a Model contextualized problems using various representations	2	2-3	2-3	0	4-6
MA 6.3.2.b Represent a variety of quantitative relationships using symbols and words	Assessed at the local level				
Gr6 Procedures	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.3.3 Students will apply properties to solve equations.					
MA 6.3.3.a Explain the multiplication property of equality	Assessed at the local level				
MA 6.3.3.b Evaluate numerical expressions containing multiple operations with respect to order of operations	1	2-4	0	0	2-4
MA 6.3.3.c Evaluate simple algebraic expressions involving multiplication and division	1	1-3	0	0	1-3
MA 6.3.3.d Solve one-step equations involving positive rational numbers	1	1-3	0	0	1-3
MA 6.3.3.e Identify and explain the properties of equality used in solving one-step equations	2	0-1	1-2	0	1-3
DATA ANALYSIS/PROBABILITY CONCEPTS					
Gr6 Display and Analysis	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.4.1 Students will organize, display, compare, and interpret data.					
MA 6.4.1.a Represent data using stem and leaf plots, histograms, and frequency charts	Assessed at the local level				

MA 6.4.1.b Compare and interpret data sets and their graphical representations	2	0-1	3-4	0	3-5
MA 6.4.1.c Find the mean, median, mode, and range for a set of data	1	2-4	0	0	2-4
MA 6.4.1.d Compare the mean, median, mode, and range from two sets of data	Assessed at the local level				
Gr6 Predictions and Inferences	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.4.2 Students will construct predictions based on data.					
MA 6.4.2.a *Make predictions based on data and create questions to further investigate the quality of the predictions*	Assessed at the local level				
Gr6 Probability	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 6.4.3 Students will apply basic concepts of probability.					
MA 6.4.3.a Describe the theoretical probability of an event using a fraction, percentage, decimal, or ratio	Assessed at the local level				
MA 6.4.3.b Compute theoretical probabilities for independent events	2	0-1	1-2	0	1-3
MA 6.4.3.c Find experimental probability for independent events	1	1-3	0	0	1-3

Nebraska State Accountability - Mathematics (NeSA-M) Table of Specifications					
Grade 7					
NUMBER SENSE					
Gr7 Number System	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.1.1 Students will represent and show relationships among rational numbers.					
MA 7.1.1.a Show equivalence among fractions, decimals, and percents	2	0-1	2-3	0	2-4
MA 7.1.1.b Compare and order rational numbers	2	0-1	1-2	0	1-3
MA 7.1.1.c Represent large numbers using scientific notation	1	1-3	0	0	1-3
MA 7.1.1.d Classify numbers as natural, whole, integer, or rational	Assessed at the local level				
MA 7.1.1.e Find least common multiple and greatest common divisor given two numbers	Assessed at the local level				
Gr7 Operations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.1.2 Students will demonstrate the meaning of arithmetic operations with positive fractions, decimals, and integers.					
MA 7.1.2.a Use drawings, words, and symbols to explain the meaning of multiplication and division of fractions	Assessed at the local level				
MA 7.1.2.b Use drawings, words, and symbols to explain the meaning of multiplication and division of decimals	Assessed at the local level				
MA 7.1.2.c Use drawings, words, and symbols to explain the addition and subtraction of integers	Assessed at the local level				
Gr7 Computation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.1.3 Students will compute fluently and accurately using appropriate strategies and tools.					
MA 7.1.3.a Compute accurately with integers	1	2-3	0	0	2-3
MA 7.1.3.b Select, apply, and explain the method of computation when problem solving using integers and positive rational numbers	2	1-2	1-2	0	2-4
MA 7.1.3.c Solve problems involving percent of numbers	2	1-2	1-2	0	2-4
Gr7 Estimation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**

MA 7.1.4 Students will estimate and check reasonableness of answers using appropriate strategies and tools.					
MA 7.1.4.a Use estimation methods to check the reasonableness of solutions for problems involving integers and positive rational numbers	2	0-1	1-2	0	1-3
GEOMETRIC/MEASUREMENT CONCEPTS					
Gr7 Characteristics	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.2.1 Students will describe, compare, and contrast properties and relationships of geometric shapes and objects.					
MA 7.2.1.a Identify and describe similarity of two-dimensional shapes using side and angle measurement	Assessed at the local level				
MA 7.2.1.b Name line, line segment, ray, and angle	Assessed at the local level				
Gr7 Coordinate Geometry	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.2.2 Students will specify locations and describe relationships using coordinate geometry.					
MA 7.2.2.a Plot the location of an ordered pair in the coordinate plane	1	1-2	0	0	1-2
MA 7.2.2.b Identify the quadrant of a given point in the coordinate plane	Assessed at the local level				
MA 7.2.2.c Find the distance between points along horizontal and vertical lines of a coordinate plane	1	1-2	0	0	1-2
Gr7 Transformations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.2.3 Students will use transformations and symmetry to analyze geometric shapes.					
MA 7.2.3.a Identify lines of symmetry for a reflection	Assessed at the local level				
MA 7.2.3.b Perform and describe positions and orientation of shapes under a single transformation on a coordinate plane	2	0-1	1-2	0	1-3
Gr7 Spatial Modeling	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.2.4 Students will use visualization to create geometric models in solving problems.					
MA 7.2.4.a Identify the shapes that make up the three-dimensional object	Assessed at the local level				
MA 7.2.4.b Create two-dimensional representations of three-dimensional objects to visualize and solve problems	Assessed at the local level				
MA 7.2.4.c Draw angles to given degree	Assessed at the local level				

Gr7 Measurement	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 7.2.5 Students will select and apply appropriate procedures, tools, and formulas to determine measurements.					
MA 7.2.5.a Measure angles to the nearest degree	Assessed at the local level				
MA 7.2.5.b Determine the area of trapezoids and circles, and the circumference of circles	2	1-2	2-3	0	3-5
MA 7.2.5.c Recognize the inverse relationship between the size of a unit and the number of units used when measuring	Assessed at the local level				
ALGEBRAIC CONCEPTS					
Gr7 Relationships	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 7.3.1 Students will represent and analyze relationships using algebraic symbols.					
MA 7.3.1.a Describe and create algebraic expressions from words, tables, and graphs	2	0-1	2-3	0	2-4
MA 7.3.1.b Use a variable to describe a situations with an inequality	2	0	1-2	0	1-2
MA 7.3.1.c Recognize and generate equivalent forms of simple algebraic expressions	Assessed at the local level				
Gr7 Modeling in Context	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 7.3.2 Students will create, use, and interpret models of quantitative relationships.					
MA 7.3.2.a Model contextualized problems using various representations	2	1-2	2-3	0	3-5
MA 7.3.2.b Represent a variety of quantitative relationships using algebraic expressions and one-step equations	Assessed at the local level				
Gr7 Procedures	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 7.3.3 Students will apply properties to solve equations and inequalities.					
MA 7.3.3.a Explain additive inverse of addition	Assessed at the local level				
MA 7.3.3.b Use symbolic representation of the distributive property	Assessed at the local level				
MA 7.3.3.c Given the value of the variable(s), evaluate algebraic expressions with respect to order of operations	1	3-5	0	0	3-5
MA 7.3.3.d Solve two-step equations involving integers and positive rational numbers	2	0-1	1-3	0	2-4
MA 7.3.3.e Solve one-step inequalities involving positive rational numbers	2	0-1	2-3	0	2-4

MA 7.3.3.f Identify and explain the properties used in solving two-step equations	Assessed at the local level				
DATA ANALYSIS/PROBABILITY CONCEPTS					
Gr7 Display and Analysis	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.4.1 Students will formulate questions that can be addressed with data, and then organize, display, and analyze the relevant data to answer their questions.					
MA 7.4.1.a Analyze data sets and interpret their graphical representations	2	0-1	2-3	0	2-4
MA 7.4.1.b Find and interpret mean, median, mode, and range for sets of data	2	0-1	1-2	0	1-3
MA 7.4.1.c Explain the difference between a population and a sample	Assessed at the local level				
MA 7.4.1.d List biases that may be created by various data collection processes	Assessed at the local level				
MA 7.4.1.e Formulate a question about a characteristic that can be answered by simulation or a survey	Assessed at the local level				
Gr7 Predictions and Inferences	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.4.2 Students will evaluate predictions and make inferences based on data.					
MA 7.4.2.a Determine if data collected from a sample can be used to make predictions about a population	Assessed at the local level				
Gr7 Probability	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 7.4.3 Students will apply and interpret basic concepts of probability.					
MA 7.4.3.a Find the probability of independent compound events	2	0	1-2	0	1-2
MA 7.4.3.b Compare and contrast theoretical and experimental probabilities	2	0	1-2	0	1-2

Nebraska State Accountability - Mathematics (NeSA-M) Table of Specifications					
Grade 8					
NUMBER SENSE					
Gr8 Number System	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.1.1 Students will represent and show relationships among real numbers.					
MA 8.1.1.a Compare and order real numbers	2	0	1-2	0	1-2
MA 8.1.1.b Demonstrate relative position of real numbers on the number line	Assessed at the local level				
MA 8.1.1.c Represent small numbers using scientific notation	2	0-1	1-2	0	1-3
MA 8.1.1.d Classify numbers as natural, whole, integer, rational, irrational, or real	1	1-2	0	0	1-2
Gr8 Operations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.1.2 Students will demonstrate the meaning of arithmetic operations with integers.					
MA 8.1.2.a Use drawings, words, and symbols to explain the meaning of addition, subtraction, multiplication, and division of integers	Assessed at the local level				
MA 8.1.2.b Use words and symbols to explain the zero property of multiplication	Assessed at the local level				
MA 8.1.2.c Use words and symbols to explain why division by zero is undefined	Assessed at the local level				
Gr8 Computation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.1.3 Students will compute fluently and accurately using appropriate strategies and tools.					
MA 8.1.3.a Compute accurately with rational numbers	1	2-4	0	0	2-4
MA 8.1.3.b Evaluate expressions involving absolute value of integers	1	1-3	0	0	1-3
MA 8.1.3.c Calculate squares of integers, the square roots of perfect squares, and the square roots of whole numbers using technology	Assessed at the local level				
MA 8.1.3.d Select, apply, and explain the method of computation when problem solving using rational numbers	2	0-1	2-3	0	2-4
MA 8.1.3.e Solve problems involving ratios and proportions	2	0-1	2-3	0	2-4

Gr8 Estimation	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 8.1.4 Students will estimate and check reasonableness of answers using appropriate strategies and tools.					
MA 8.1.4.a Use estimation methods to check the reasonableness of solutions for problems involving rational numbers	2	0-1	1-2	0	1-3
GEOMETRIC/MEASUREMENT CONCEPTS					
Gr8 Characteristics	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 8.2.1 Students will describe, compare, and contrast characteristics, properties, and relationships of geometric shapes and objects.					
MA 8.2.1.a Identify and describe similarity of three-dimensional objects	Assessed at the local level				
MA 8.2.1.b Compare and contrast relationships between similar and congruent objects	Assessed at the local level				
MA 8.2.1.c Identify geometric properties of parallel lines cut by a transversal and related angles	1	2-4	0	0	2-4
MA 8.2.1.d Identify pairs of angles	1	2-4	0	0	2-4
MA 8.2.1.e Examine the relationships of the interior angles of a triangle	2	0-1	1-2	0	1-3
Gr8 Coordinate Geometry	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 8.2.2 Students will specify locations and describe spatial relationships using coordinate geometry.					
MA 8.2.2.a Use coordinate geometry to represent and examine the properties of rectangles and squares using horizontal and vertical segments	2	0-1	1-2	0	1-3
Gr8 Transformations	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 8.2.3 Students will perform transformations and use them to analyze the orientation and size of geometric shapes.					
MA 8.2.3.a Identify the similarity of dilated shapes	Assessed at the local level				
MA 8.2.3.b Perform and describe positions and sizes of shapes under dilations	Assessed at the local level				
Gr8 Spatial Modeling	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
MA 8.2.4 Students will use visualization, spatial reasoning, and geometric modeling to solve problems.					

MA 8.2.4.a Draw geometric objects with specified properties	Assessed at the local level				
Gr8 Measurement	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.2.5 Students will select and apply appropriate procedures, tools, and formulas to determine measurements.					
MA 8.2.5.a Use strategies to find the perimeter and area of complex shapes	Assessed at the local level				
MA 8.2.5.b Determine surface area and volume of three-dimensional objects	Assessed at the local level				
MA 8.2.5.c Apply the Pythagorean theorem to find missing lengths in right triangles and to solve problems	2	0-1	2-3	0	2-4
MA 8.2.5.d Use scale factors to find missing lengths in similar shapes	1	1-3	0	0	1-3
MA 8.2.5.e Convert between metric and standard units of measurement, given conversion factors	Assessed at the local level				
ALGEBRAIC CONCEPTS					
Gr8 Relationships	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.3.1 Students will represent and analyze relationships using algebraic symbols.					
MA 8.3.1.a Represent and analyze a variety of patterns with tables, graphs, words, and algebraic equations	Assessed at the local level				
MA 8.3.1.b Describe relationships using algebraic expressions, equations, and inequalities	2	0-1	2-4	0	2-5
MA 8.3.1.c Identify constant slope from tables and graphs	Assessed at the local level				
Gr8 Modeling in Context	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.3.2 Students will create, use, and interpret models of quantitative relationships.					
MA 8.3.2.a Model contextualized problems using various representations	3	0	2-3	1-2	3-5
MA 8.3.2.b Represent a variety of quantitative relationships using algebraic expressions and two-step/one-step variable equations	Assessed at the local level				
Gr8 Procedures	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.3.3 Students will apply properties to solve equations and inequalities.					
MA 8.3.3.a Explain the multiplicative inverse	Assessed at the local level				

MA 8.3.3.b Evaluate numerical expressions containing whole number exponents	2	1-3	1-2	0	2-5
MA 8.3.3.c Solve multi-step equations involving rational numbers	2	0-1	2-4	0	2-5
MA 8.3.3.d Solve two-step inequalities involving rational numbers	2	0-1	2-4	0	2-5
MA 8.3.3.e Identify and explain the properties used in solving two-step inequalities and multi-step equations	Assessed at the local level				
DATA ANALYSIS/PROBABILITY CONCEPTS					
Gr8 Display and Analysis	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.4.1 Students will formulate questions that can be addressed with data, and then organize, display, and analyze the relevant data to answer their questions.					
MA 8.4.1.a Represent data using circle graphs and box plots with and without the use of technology	Assessed at the local level				
MA 8.4.1.b Compare characteristics between sets of data or within a given set of data	3	0	1-2	1-2	2-4
MA 8.4.1.c Find, interpret, and compare measures of central tendency (mean, median, and mode) and the quartiles for sets of data	Assessed at the local level				
MA 8.4.1.d Select the most appropriate unit of central tendency for sets of data	2	0-1	1-2	0	1-3
MA 8.4.1.e Identify misrepresentation and misinterpretation of data represented in circle graphs and box plots	2	0-1	1-2	0	1-3
Gr8 Predictions and Inferences	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.4.2 Students will evaluate predictions and make inferences based on data.					
MA 8.4.2.a Evaluate predictions to formulate new questions and plan new studies	Assessed at the local level				
MA 8.4.2.b Compare and contrast two sets of data to make inferences	Assessed at the local level				
Gr8 Probability	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 8.4.3 Students will apply and interpret basic concepts of probability.					
MA 8.4.3.a Identify complementary events and calculate their probabilities	2	0-1	1-2	0	1-3
MA 8.4.3.b Compute probabilities for independent compound events	2	0-1	1-2	0	1-3

Nebraska State Accountability - Mathematics (NeSA-M) Table of Specifications					
Grade 11					
NUMBER SENSE					
Gr11 Number System	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.1.1 Students will represent and show relationships among real numbers.					
MA 12.1.1.a Demonstrate multiple equivalent forms of irrational numbers	Assessed at the local level				
MA 12.1.1.b Compare, contrast, and apply the properties of numbers and the real number system, including the rational, irrational, imaginary and complex numbers	Assessed at the local level				
Gr11 Operations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.1.2 Students will demonstrate the meaning and effects of arithmetic operations with real numbers.					
MA 12.1.2.a Use drawings, words, and symbols to explain the effects of such operations as multiplication and division, and computing positive powers and roots on the magnitude of quantities	Assessed at the local level				
MA 12.1.2.b Use drawings, words, and symbols to explain that the distance between two numbers on the number line is the absolute value of their difference	Assessed at the local level				
Gr11 Computation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.1.3 Students will compute fluently and accurately using appropriate strategies and tools.					
MA 12.1.3.a Compute accurately with real numbers	1	1-2	0	0	1-2
MA 12.1.3.b Simplify exponential expressions	2	0	1-2	0	1-2
MA 12.1.3.c Multiply and divide numbers using scientific notation	Assessed at the local level				
MA 12.1.3.d Select, apply, and explain the method of computation when problem solving using real numbers	Assessed at the local level				
Gr11 Estimation	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.1.4 Students will estimate and check reasonableness of answers using appropriate strategies and tools.					

MA 12.1.4.a Use estimation methods to check the reasonableness of real number computations and decide if the problem calls for an approximation or an exact number	2	0-1	1-2	0	1-3
MA 12.1.4.b Distinguish relevant from irrelevant information, identify missing information and either find what is needed or make appropriate estimates	Assessed at the local level				
GEOMETRIC/MEASUREMENT CONCEPTS					
Gr11 Characteristics	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.2.1 Students will analyze characteristics, properties, and relationships among geometric shapes and objects.					
12.2.1.a Identify and explain the necessity of and give examples of definitions and theorems	Assessed at the local level				
MA 12.2.1.b Analyze properties and relationships among classes of two and three dimensional geometric objects using inductive reasoning and counterexamples	Assessed at the local level				
MA 12.2.1.c State and prove geometric theorems using deductive reasoning	Assessed at the local level				
MA 12.2.1.d Apply geometric properties to solve problems	2	0-1	3-4	0	3-5
MA 12.2.1.e Identify and apply right triangle relationships	2	0-1	2-4	0	2-5
MA 12.2.1.f Recognize that there are geometries, other than Euclidean geometry, in which the parallel postulate is not true	Assessed at the local level				
MA 12.2.1.g Know the definitions and basic properties of a circle and use them to prove basic theorems and solve problems	Assessed at the local level				
Gr11 Coordinate Geometry	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.2.2 Students will use coordinate geometry to analyze and describe relationships in the coordinate plane.					
MA 12.2.2.a Use coordinate geometry to analyze geometric situations	2	0-1	2-3	0	2-4
MA 12.2.2.b Apply the midpoint formula	Assessed at the local level				
MA 12.2.2.c Apply the distance formula	2	0-1	1-2	0	1-3
MA 12.2.2.d Prove special types of triangles and quadrilaterals	3	0	0-1	1-2	1-3
Gr11 Transformations	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.2.3 Students will apply and analyze transformations.					

MA 12.2.3.a Explain and justify the effects of simple transformations on the ordered pairs of two-dimensional shapes	Assessed at the local level				
MA 12.2.3.b Perform and describe multiple transformations	Assessed at the local level				
Gr11 Spatial Modeling	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.2.4 Students will use visualization, spatial reasoning, and geometric modeling to solve problems.					
MA 12.2.4.a Sketch and draw appropriate representations of geometric objects using ruler, protractor, or technology	Assessed at the local level				
MA 12.2.4.b Use geometric models to visualize, describe, and solve problems	2	0-1	2-3	0	2-4
Gr11 Measurement	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.2.5 Students will apply the units, systems, and formulas to solve problems.					
MA 12.2.5.a Use strategies to find surface area and volume of complex objects	Assessed at the local level				
MA 12.2.5.b Apply appropriate units and scales to solve problems involving measurement	Assessed at the local level				
MA 12.5.c Convert between various units of area ad volume, such as square feet to square yards	Assessed at the local level				
MA 12.2.5.d Convert equivalent rates	2	1-2	1-2	0	2-4
MA 12.2.5.e Find arc length and area of sectors of a circle	Assessed at the local level				
MA 12.2.5.f Determine surface area and volume of three-dimensional objects	Assessed at the local level				
MA 12.2.5.g Know that the effect of a scale factor k on length, area and volume is to multiply each k, k^2 and k^3, respectively	Assessed at the local level				
ALGEBRAIC CONCEPTS					
Gr11 Relationships	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.3.1 Students will generalize, represent, and analyze relationships using algebraic symbols.					
MA 12.3.1.a Represent, interpret, and analyze functions with graphs, tables, and algebraic notation, and convert among these representations	3	0	2-3	1-2	3-5
MA 12.3.1.b Identify domain and range of functions represented in either symbolic or graphical form	Assessed at the local level				

MA 12.3.1.c Identify the slope and intercepts of a linear relationship from an equation or graph	2	0-1	2-3	0	2-4
MA 12.3.1.d Identify characteristics of linear and non-linear functions	3	0	2-3	1-2	3-5
MA 12.3.1.e Graph linear and non-linear functions	Assessed at the local level				
MA 12.3.1.f Compare and analyze the rate of change by using ordered pairs, tables, graphs, and equations	3	0	1-2	1-2	2-4
MA 12.3.1.g Graph and interpret linear inequalities	Assessed at the local level				
MA 12.3.1.h Represent, interpret, and analyze functions and their inverses	Assessed at the local level				
MA 12.3.1.i Determine if a relation is a function	Assessed at the local level				
Gr11 Modeling in Context	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.3.2 Students will model and analyze quantitative relationships.					
MA 12.3.2.a Model contextualized problems using various representations	Assessed at the local level				
MA 12.3.2.b Represent a variety of quantitative relationships using linear equations and one variable inequalities	3	0	0	2-4	2-4
MA 12.3.2.c Analyze situations to determine the type of algebraic relationship	Assessed at the local level				
MA 12.3.2.d Model contextualized problems using various representations for non-linear functions	Assessed at the local level				
Gr11 Procedures	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.3.3 Students will represent and solve equations and inequalities.					
MA 12.3.3.a Explain/apply the reflexive, symmetric, and transitive properties of equality	Assessed at the local level				
MA 12.3.3.b Simplify algebraic expressions involving exponents	1	1-3	0	0	1-3
MA 12.3.3.c Add and subtract polynomials	1	1-3	0	0	1-3
MA 12.3.3.d Multiply and divide polynomials	1	1-3	0	0	1-3
MA 12.3.3.e Factor polynomials	Assessed at the local level				
MA 12.3.3.f Identify and generate equivalent forms of linear equations	1	1-3	0	0	1-3
MA 12.3.3.g Solve linear equations and inequalities including absolute value	Assessed at the local level				
MA 12.3.3.h Identify and explain the properties used in solving equations and inequalities	Assessed at the local level				

MA 12.3.3.i Solve quadratic equations	Assessed at the local level				
MA 12.3.3.j Add, subtract, and simplify rational expressions	Assessed at the local level				
MA 12.3.3.k Multiply, divide, and simplify rational expressions	Assessed at the local level				
MA 12.3.3.l Evaluate polynomial and rational expressions and expressions containing radicals and absolute values at specified values of their variables	Assessed at the local level				
MA 12.3.3.m Derive and use the formulas for the general term and summation of finite arithmetic and geometric series	Assessed at the local level				
MA 12.3.3.n Combine functions by composition, as well as by addition, subtraction, multiplication, and division	Assessed at the local level				
MA 12.3.3.o Solve an equation involving several variables for one variable in terms of the others	Assessed at the local level				
MA 12.3.3.p Analyze and solve systems of two linear equations in two variables algebraically and graphically	Assessed at the local level				
DATA ANALYSIS/PROBABILITY CONCEPTS					
Gr11 Display and Analysis	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.4.1 Students will formulate a question and design a survey or an experiement in which data is collected and displayed in a variety of formats, then select and use appropriate statistical methods to analyze the data.					
MA 12.4.1.a Interpret data represented by the normal distribution and formulate conclusions	Assessed at the local level				
MA 12.4.1.b Compute, identify, and interpret measures of central tendency (mean, median, mode) when provided a graph or data set	Assessed at the local level				
MA 12.4.1.c Explain how sample size and transformations of data affect measures of central tendency	Assessed at the local level				
MA 12.4.1.d Describe the shape and determine the spread (variance, standard deviation) and outliers of a data set	2	0	2-3	0	2-3
MA 12.4.1.e Explain how statistics are used or misused in the world	Assessed at the local level				
MA 12.4.1.f Create scatter plots, analyze patterns, and describe relationships in paired data	Assessed at the local level				
MA 12.4.1.g Explain the impact of sampling methods, bias, and the phrasing of questions asked during data collection and the conclusions that can rightfully be made	Assessed at the local level				

MA 12.4.1.h Explain the differences between randomized experiment and observational studies	Assessed at the local level				
Gr11 Predictions and Inferences	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.4.2 Students will develop and evaluate inferences to make predictions.					
MA 12.4.2.a Compare data sets and evaluate conclusions using graphs and summary statistics	Assessed at the local level				
MA 12.4.2.b Support inferences with valid arguments	Assessed at the local level				
MA 12.4.2.c Develop linear equations for linear models to predict unobserved outcomes using regression line and correlation coefficient	Assessed at the local level				
MA 12.4.2.d Recognize when arguments based on data confuse correlation with causation	Assessed at the local level				
Gr11 Probability	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
MA 12.4.3 Students will apply and analyze concepts of probability.					
MA 12.4.3.a Construct a sample space and a probability distribution	Assessed at the local level				
MA 12.4.3.b Identify dependent and independent events and calculate their probabilities	2	1-2	1-2	0	2-4
MA 12.4.3.c Use the appropriate counting techniques to determine the probability of an event	2	1-2	0-1	0	1-3
MA 12.4.3.d Analyze events to determine if they are mutually exclusive	2	0-1	1-2	0	1-3
MA 12.4.3.e Determine the relative frequency of a specified outcome of an event to estimate the probability of the outcome	Assessed at the local level				

Appendix D: NeSA-S Test Blueprint

Nebraska State Accountability - Science (NeSA-S) Table of Specifications					
Grade 5					
Inquiry, The Nature of Science, and Technology					
Grade 5 Abilities to do Scientific Inquiry	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 5.1.1 Students will plan and conduct investigations that lead to the development of explanations.					**8-13**
SC 5.1.1.a Ask testable scientific questions	2				
SC 5.1.1.b Plan and conduct investigations and identify factors that have the potential to impact an investigation	3				
SC 5.1.1.c Select and use equipment correctly and accurately	1				
SC 5.1.1.d Make relevant observations and measurements	2				
SC 5.1.1.e Collect and organize data	2				
SC 5.1.1.f Develop a reasonable explanation based on collected data	3				
SC 5.1.1.g Share information, procedures, and results with peers and/or adults	2				
SC 5.1.1.h Provide feedback on scientific investigations	3				
SC 5.1.1.i Use appropriate mathematics in all aspects of scientific inquiry	2				
Grade 5 Nature of Science	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 5.1.2 Students will describe how scientists go about their work.	**Assessed at the local level**				
SC 5.1.2.a Recognize that scientific explanations are based on evidence and scientific knowledge	1				
SC 5.1.2.b Recognize that new discoveries are always being made which impact scientific knowledge	1				
SC 5.1.2.c Recognize many different people study science	1				

Grade 5 Technology	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
SC 5.1.3 Students will solve a simple design problem.	**Assessed at the local level**				
SC 5.1.3.a Identify a simple problem	2				
SC 5.1.3.b Propose a solution to a simple problem	2				
SC 5.1.3.c Implement the proposed solution	3				
SC 5.1.3.d Evaluate the implementation	3				
SC 5.1.3.e Communicate the problem, design, and solution	2				
PHYSICAL SCIENCE					
Grade 5 Matter	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
SC 5.2.1 Students will explore and describe the physical properties of matter and its changes.					**3-6**
SC 5.2.1.a Identify mixtures and pure substances	1				
SC 5.2.1.b Identify physical properties of matter (color, odor, elasticity, weight, volume)	1				
SC 5.2.1.c Use appropriate metric measurements to describe physical properties	1				
SC 5.2.1.d Identify state change caused by heating and cooling solids, liquids, and gasses	1				
Grade 5 Force and Motion	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
SC 5.2.2 Students will identify the influence of forces on motion.					**3-5**
SC 5.2.2.a Describe motion by tracing and measuring an object's position over a period of time (speed)	2				
SC 5.2.2.b Describe changes in motion due to outside forces (push, pull, gravity)	1				
SC 5.2.2 c Describe magnetic behavior in terms of attraction and repulsion	1				
Grade 5 Energy	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
SC 5.2.3 Students will observe and identify signs of energy transfer.					**4-7**
SC 5.2.3.a Recognize that sound is produced from vibrating objects; the sound can be changed by changing the vibration	1				
SC 5.2.3.b Recognize that light travels in a straight line and can be reflected by an object (mirror)	1				

SC 5.2.3.c Recognize that light can travel through certain materials and not others (transparent, translucent, opaque)	1				
SC 5.2.3.d Identify ways to generate heat (friction, burning, incandescent light bulb)	1				
SC 5.2.3.e Identify materials that act as thermal conductors or insulators	1				
SC 5.2.3.f Recognize that the transfer of electricity in an electrical circuit requires a closed loop	1				
LIFE SCIENCE					
Grade 5 Life Science	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 5.3.1 Students will investigate and compare the characteristics of living things.					**2-4**
SC 5.3.1.a Compare and contrast characteristics of living and nonliving things	2				
SC 5.3.1.b Identify how parts of plants and animals function to meet basic needs (e.g., leg of an insect helps an insect move, root of a plant helps the plant obtain water)	1				
Grade 5 Heredity	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 5.3.2 Students will identify variations of inherited characteristics and life cycles.					**2-4**
SC 5.3.2.a Identify inherited characteristics of plants and animals	1				
SC 5.3.2.b Identify the life cycle of an organism	1				
SC 5.3.3 Students will describe relationships within an ecosystem.					**4-7**
SC 5.3.3.a Diagram and explain a simple food chain beginning with the Sun	2				
SC 5.3.3.b Identify the role of producers, consumers, and decomposers in an ecosystem	1				
SC 5.3.3.c Recognize the living and nonliving factors that impact the survival of organisms in an ecosystem	1				
SC 5.3.3.d Recognize all organisms cause changes, some beneficial and some detrimental, in the environment where they live	1				
SC 5.3.4 Students will describe changes in organisms over time.					**1-2**
SC 5.3.4.a Describe adaptations made by plants or animals to survive environmental changes	1				

EARTH AND SPACE SCIENCE					
Grade 5 Earth in Space	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 5.4.1 Students will observe and describe characteristics, patterns, and changes in the sky.					**1-2**
SC 5.4.1.a Recognize that the observed shape of the Moon changes from day to day during a one month period	1				
SC 5.4.1.b Recognize the motion of objects in the sky (the Sun, the Moon, stars) change over time in recognizable patterns	1				
Grade 5 Earth Structures and Processes	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 5.4.2 Students will observe and describe Earth's materials, structure, and processes.					**4-6**
SC 5.4.2.a Describe the characteristics of rocks, minerals, soil, water, and the atmosphere	1				
SC 5.4.2.b Identify weathering, erosion, and deposition as processes that build up or break down Earth's surface	1				
SC 5.4.2.c Identify how Earth materials are used (fuels, building materials, sustaining plant life)	1				
Grade 5 Energy in Earth's Systems	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 5.4.3 Students will observe and describe the effects of energy changes on Earth.					**3-5**
SC 5.4.3.a Describe the Sun's warming effect on the land and water	1				
SC 5.4.3.b Observe, measure, and record changes in weather (temperature, wind direction and speed, precipitation)	2				
SC 5.4.3.c Recognize the difference between weather, climate, and seasons	1				
Grade 5 Earth's History	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 5.4.4 Students will describe changes in Earth.					**1-3**
SC 5.4.4.a Describe how slow processes (erosion, weathering, deposition) and rapid processes (landslides, volcanic eruptions, earthquakes) change Earth's surface	1				

Nebraska State Accountability - Science (NeSA-S)
Table of Specifications

Grade 8

Inquiry, The Nature of Science, and Technology

Grade 8 Abilities to do Scientific Inquiry	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
SC 8.1.1 Students will design and conduct investigations that will lead to descriptions of relationships between evidence and explanations.					**8-13**
SC 8.1.1.a Formulate testable questions that lead to predictions and scientific investigations	2				
SC 8.1.1.b Design and conduct logical and sequential investigations including repeated trials	3				
SC 8.1.1.c Determine controls and use dependent (responding) and independent (manipulated) variables	3				
SC 8.1.1.d Select and use equipment appropriate to the investigation, demonstrate correct techniques	1				
SC 8.1.1.e Make qualitative and quantitative observations	2				
SC 8.1.1.f Record and represent data appropriately and review for quality, accuracy, and relevancy	3				
SC 8.1.1.g Evaluate predictions, draw logical inferences based on observed patterns/relationships, and account for non-relevant information	3				
SC 8.1.1.h Share information, procedures, results, and conclusions with appropriate audiences	2				
SC 8.1.1.i Analyze and provide appropriate critique of scientific investigations	3				
SC 8.1.1.j Use appropriate mathematics in all aspects of scientific inquiry	2				
Grade 8 Nature of Science	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
SC 8.1.2 Students will apply the nature of science to their own investigations.	**Assessed at the local level**				
SC 8.1.2.a Recognize science is an ongoing process and the scientific community accepts and uses explanations until they encounter new experimental evidence not matching existing explanations	1				
SC 8.1.2.b Describe how scientific discoveries influence and change society	2				

SC 8.1.2.c Recognize scientists from various cultures have made many contributions to explain the natural world	1				
Grade 8 Technology	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.1.3 Students will solve a design problem which involves one or two science concepts.	**Assessed at the local level**				
SC 8.1.3.a Identify problems for technical design	2				
SC 8.1.3.b Design a solution or product	3				
SC 8.1.3.c Implement the proposed design	3				
SC 8.1.3.d Evaluate completed technological designs or products	3				
SC 8.1.3.e Communicate the process of technical design	2				
SC 8.1.3.f Distinguish between scientific inquiry (asking questions about the natural world) and technological design (using science to solve practical problems)	1				
SC 8.1.3.g Describe how science and technology are reciprocal	1				
SC 8.1.3.h Recognize that solutions have intended and unintended consequences	1				
SC 8.1.3.i Compare and contrast the reporting of scientific knowledge and the reporting of technological knowledge	2				
PHYSICAL SCIENCE					
Grade 8 Matter	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.2.1 Students will identify and describe the particulate nature of matter including physical and chemical interactions.					**4-7**
SC 8.2.1.a Compare and contrast elements, compounds, and mixtures	2				
SC 8.2.1.b Describe physical and chemical properties of matter	2				
SC 8.2.1.c Recognize most substances can exist as a solid, liquid, or gas depending on temperature	1				
SC 8.2.1.d Compare and contrast solids, liquids, and gasses based on properties of these states of matter	2				
SC 8.2.1.e Distinguish between physical and chemical changes (phase changes, dissolving, burning, rusting)	1				
SC 8.2.1.f Recognize conservation of matter in physical and chemical changes	1				

SC 8.2.1.g Classify substances into similar groups based on physical properties	2				
Grade 8 Force and Motion	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.2.2 Students will investigate and describe forces and motion.					**3-6**
SC 8.2.2.a Describe motion of an object by its position and velocity	2				
SC 8.2.2.b Recognize an object that is not being subjected to a force will continue to move at a constant speed in a straight line or stay at rest (Newton's 1st law)	1				
SC 8.2.2.c Compare the motion of objects related to the effects of balanced and unbalanced forces	2				
SC 8.2.2.d Recognize that everything on or around Earth is pulled towards Earth's center by gravitational force	1				
Grade 8 Energy	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.2.3 Students will identify and describe how energy systems and matter interact.					**3-6**
SC 8.2.3.a Recognize that vibrations set up wave-like disturbances that spread away from the source (sound, seismic, water waves)	1				
SC 8.2.3.b Identify that waves move at different speeds in different materials	1				
SC 8.2.3.c Recognize that light interacts with matter by transmission (including refraction), absorption, or scattering (including reflection)	1				
SC 8.2.3.d Recognize that to see an object, light from the surface of the object must enter the eye; the color seen depends on the properties of the surface and the color of the available light sources	1				
SC 8.2.3.e Recognize that heat moves from warmer objects to cooler objects until both reach the same temperature	1				
SC 8.2.3.f Describe transfer of energy from electrical and magnetic sources to different energy forms (heat, light, sound, chemical)	1				
SC 8.2.3.g Recognize all energy is neither created nor destroyed	1				

LIFE SCIENCE					
Grade 8 Structure and Function of Living Systems	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.3.1 Students will investigate and describe the structure and function of living organisms.					**4-7**
SC 8.3.1.a Recognize the levels of organization in living organisms (cells, tissues, organs, organ systems, organisms)	1				
SC 8.3.1.b Recognize that all organisms are composed of one or many cells; that these cells must grow, divide, and use energy; and that all cells function similarly	1				
SC 8.3.1.c Recognize specialized cells perform specialized functions in multicellular organisms	1				
SC 8.3.1.d Identify the organs and functions of the major systems of the human body and describe ways that these systems interact with each other	1				
SC 8.3.1.e Describe how plants and animals respond to environmental stimuli	1				
Grade 8 Heredity	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.3.2 Students will investigate and describe the relationship between reproduction and heredity.					**1-3**
SC 8.3.2.a Recognize that hereditary information is contained in genes within the chromosomes of each cell	1				
SC 8.3.2.b Compare and contrast sexual and asexual reproduction	2				
Grade 8 Flow of Matter and Energy in Ecosystems	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.3.3 Students will describe populations and ecosystems.					**3-6**
SC 8.3.3.a Diagram and explain the flow of energy through a simple food web	2				
SC 8.3.3.b Compare the roles of producers, consumers, and decomposers in an ecosystem	2				
SC 8.3.3.c Recognize that producers transform sunlight into chemical energy through photosynthesis	1				
SC 8.3.3.d Determine the biotic and abiotic factors that impact the number of organisms an ecosystem can support	2				
SC 8.3.3.e Recognize a population is all the individuals of a species at a given place and time	1				

SC 8.3.3.f Identify symbiotic relationships among organisms	1				
SC 8.3.3.g Identify positive and negative effects of natural and human activity on an ecosystem	2				
Grade 8 Biodiversity	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.3.4 Students will identify characteristics of organisms that help them survive.					**2-4**
SC 8.3.4.a Describe how an inherited characteristic enables an organism to improve its survival rate	2				
SC 8.3.4.b Recognize the extinction of a species is caused by the inability to adapt to an environmental change	1				
SC 8.3.4.c Use anatomical features of an organism to infer similarities among other organisms	2				
EARTH AND SPACE SCIENCE					
Grade 8 Earth in Space	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.4.1 Students will investigate and describe Earth and the solar system.					**2-4**
SC 8.4.1.a Describe the components of the solar system (the Sun, planets, moons, asteroids, comets)	1				
SC 8.4.1.b Describe the relationship between motion of objects in the solar system and the phenomena of day, year, eclipses, phases of the Moon and seasons	2				
SC 8.4.1.c Describe the effects of gravity on Earth (tides) and the effect of gravity on objects in the solar system	2				
Grade 8 Earth Structures and Processes	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.4.2 Students will investigate and describe Earth's structure, systems, and processes.					**6-10**
SC 8.4.2.a Describe the layers of Earth (core, mantle, crust, atmosphere)	1				
SC 8.4.2.b Describe the physical composition of soil	1				
SC 8.4.2.c Describe the mixture of gasses in Earth's atmosphere and how the atmosphere's properties change at different elevations	1				
SC 8.4.2.d Describe evidence of Earth's magnetic field	1				
SC 8.4.2.e Compare and contrast constructive and destructive forces (deposition, erosion, weathering, plate motion causing uplift, volcanoes, earthquakes) that impact Earth's surface	2				
SC 8.4.2.f Describe the rock cycle	1				

SC 8.4.2.g Describe the water cycle (evaporation, condensation, precipitation)	1				
SC 8.4.2.h Classify Earth materials as renewable or nonrenewable	2				
Grade 8 Energy in Earth's Systems	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.4.3 Students will investigate and describe energy in Earth's systems.					**2-4**
SC 8.4.3.a Describe how energy from the Sun influences the atmosphere and provides energy for plant growth	1				
SC 8.4.3.b Identify factors that influence daily and seasonal changes on Earth (tilt of the Earth, humidity, air pressure, air masses)	1				
SC 8.4.3.c Describe atmospheric movements that influence weather and climate (air masses, jet stream)	1				
Grade 8 Earth's History	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 8.4.4 Students will use evidence to draw conclusions about changes in Earth.					**1-3**
SC 8.4.4.a Recognize that Earth processes we see today are similar to those that occurred in the past (uniformity of processes)	1				
SC 8.4.4.b Describe how environmental conditions have changed through use of the fossil record	2				

Nebraska State Accountability - Science (NeSA-S) Table of Specifications					
Grade 11					
Inquiry, The Nature of Science, and Technology					
Grade 11 Abilities to do Scientific Inquiry	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.1.1 Students will design and conduct investigations that lead to the use of logic and evidence in the formulation of scientific explanations and models.					**8-13**
SC 12.1.1.a Formulate a testable hypothesis supported by prior knowledge to guide an investigation	2				
SC 12.1.1.b Design and conduct logical and sequential scientific investigations with repeated trials and apply findings to new investigations	3				
SC 12.1.1.c Identify and manage variables and constraints	3				
SC 12.1.1.d Select and use lab equipment and technology appropriately and accurately	1				
SC 12.1.1.e Use tools and technology to make detailed qualitative and quantitative observations	1				
SC 12.1.1.f Represent and review collected data in a systematic, accurate, and objective manner	3				
SC 12.1.1.g Analyze and interpret data, synthesize ideas, formulate and evaluate models, and clarify concepts and explanations	3				
SC 12.1.1.h Use results to verify or refute a hypothesis	2				
SC 12.1.1.i Propose and/or evaluate possible revisions and alternate explanations	3				
SC 12.1.1.j Share information, procedures, results, conclusions, and defend findings to a scientific community (peers, science fair audience, policy makers)	3				
SC 12.1.1.k Evaluate scientific investigations and offer revisions and new ideas as appropriate	3				
SC 12.1.1.l Use appropriate mathematics in all aspects of scientific inquiry	2				
Grade 11 Nature of Science	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.1.2 Students will apply the nature of scientific knowledge to their own investigations and in the evaluation of scientific explanations.	**Assessed at the local level**				

SC 12.1.2.a Recognize that scientific explanations must be open to questions, possible modifications, and must be based upon historical and current scientific knowledge	1				
SC 12.1.2.b Describe how society influences the work of scientists and how science, technology, and current scientific discoveries influence and change society	2				
SC 12.1.2.c Recognize that the work of science results in incremental advances, almost always building on prior knowledge, in our understanding of the world	1				
SC 12.1.2.d Research and describe the difficulties experienced by scientific innovators who had to overcome commonly held beliefs of their times to reach conclusions that we now take for granted	2				
Grade 11 Technology	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.1.3 Students will solve a complex design problem.	**Assessed at the local level**				
SC 12.1.3.a Propose designs and choose between alternative solutions of a problem	3				
SC 12.1.3.b Assess the limits of a technological design	3				
SC 12.1.3.c Implement the selected solution	3				
SC 12.1.3.d Evaluate the solution and its consequences	3				
SC 12.1.3.e Communicate the problem, process, and solution	2				
SC 12.1.3.f Compare and contrast the reasons for the pursuit of science and the pursuit of technology	2				
SC 12.1.3.g Explain how science advances with the introduction of new technology	1				
SC 12.1.3.h Recognize creativity, imagination, and a good knowledge base are all needed to advance the work of science and engineering	1				
PHYSICAL SCIENCE					
Grade 11 Matter	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.2.1 Students will investigate and describe matter in terms of its structure, composition and conservation.					**4-7**
SC 12.2.1.a Recognize bonding occurs when outer electrons are transferred (ionic) or shared (covalent)	1				
SC 12.2.1.b Describe the energy transfer associated with phase changes between solids, liquids, and gasses	1				

SC 12.2.1.c Describe the three normal states of matter (solid, liquid, gas) in terms of energy, particle arrangement, particle motion, and strength of bond between molecules	1				
SC 12.2.1.d Recognize a large number of chemical reactions involve the transfer of either electrons (oxidation/reduction) or hydrogen ions (acid/base) between reacting ions, molecules, or atoms	1				
SC 12.2.1.e Identify factors affecting rates of chemical reactions (temperature, particle size, surface area)	1				
SC 12.2.1.f Recognize the charges and relative locations of subatomic particles (neutrons, protons, electrons)	1				
SC 12.2.1.g Describe properties of atoms, ions, and isotopes	1				
SC 12.2.1.h Describe the organization of the periodic table of elements with respect to patterns of physical and chemical properties	1				
Grade 11 Force and Motion	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.2.2 Students will investigate and describe the nature of field forces and their interactions with matter.					**4-8**
SC 12.2.2.a Describe motion with respect to displacement and acceleration	2				
SC 12.2.2.b Describe how the law of inertia (Newton's 1st law) is evident in a real-world event	2				
SC 12.2.2.c Make predictions based on relationships among net force, mass, and acceleration (Newton's 2nd law)	2				
SC 12.2.2.d Recognize that all forces occur in equal and opposite pairs (Newton's 3rd law)	1				
SC 12.2.e Describe how Newton's 3rd law of motion is evident in a real-world event	2				
SC 12.2.2.f Describe gravity as a force that each mass exerts on another mass, which is proportional to the masses and the distance between them	2				
SC 12.2.2.g Recognize that an attractive or repulsive electric force exists between two charged particles and that this force is proportional to the magnitude of the charges and the distance between them	1				
Grade 11 Energy	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.2.3 Students will describe and investigate energy systems relating to the conservation and interaction of energy and matter.					**4-8**

SC 12.2.3.a Describe mechanical wave properties (speed, wavelength, frequency, amplitude) and how waves travel through a medium	1				
SC 12.2.3.b. Recognize that the energy in waves can be changed into other forms of energy	1				
SC 12.2.3.c Recognize that light can behave as a wave (diffraction and interference)	1				
SC 12.2.3.d Distinguish between temperature (a measure of the average kinetic energy of atomic or molecular motion) and heat (the quantity of thermal energy that transfers due to a change in temperature)	2				
SC 12.2.3.e Compare and contrast methods of heat transfer and the interaction of heat with matter via conduction, convection, and radiation	2				
SC 12.2.3.f Recognize that the production of electromagnetic waves is a result of changes in the motion of charges or by a changing magnetic field	1				
SC 12.2.3.g Compare and contrast segments of the electromagnetic spectrum (radio, micro, infrared, visible, ultraviolet, x-rays, gamma) based on frequency and wavelength	2				
SC 12.2.3.h Recognize that nuclear reactions (fission, fusion, radioactive decay) convert a fraction of the mass of interacting particles into energy, and this amount of energy is much greater than the energy in chemical interactions	1				
SC 12.2.3.i Interpret the law of conservation of energy to make predictions for the outcome of an event	2				
SC 12.2.3.j Identify that all energy can be considered to be either kinetic, potential, or energy contained by a field (e.g. electromagnetic waves)	1				
SC 12.2.3.k Identify endothermic and exothermic reactions	1				
LIFE SCIENCE					
Grade 11 Structure and Function of Living Systems	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.3.1 Students will investigate and describe the chemical basis of the growth, development, and maintenance of cells.					**4-7**
SC 12.3.1.a Identify the complex molecules (carbohydrates, lipids, proteins, nucleic acids) that make up living organisms	1				
SC 12.3.1.b Identify the form and function of sub-cellular structures that regulate cellular activities	1				

SC 12.3.1.c Describe the cellular functions of photosynthesis, respiration, cell division, protein synthesis, transport of materials, and energy capture/release	2				
SC 12.3.1.d Describe how an organism senses changes in its internal or external environment and responds to ensure survival	2				
Grade 11 Heredity	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.3.2 Students will describe the molecular basis of reproduction and heredity.					**3-6**
SC 12.3.2.a Identify that information passed from parents to offspring is coded in DNA molecules	1				
SC 12.3.2.b Describe the basic structure of DNA and its function in genetic inheritance	1				
SC 12.3.2.c Recognize how mutations could help, harm, or have no effect on individual organisms	1				
SC 12.3.2.d Describe that sexual reproduction results in a largely predictable, variety of possible gene combinations in the offspring of any two parents	2				
Grade 11 Flow of Matter and Energy in Ecosystems	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.3.3 Students will describe, on a molecular level, the cycling of matter and the flow of energy between organisms and their environment.					**1-3**
SC 12.3.3.a Explain how the stability of an ecosystem is increased by biological diversity	2				
SC 12.3.3.b Recognize that atoms and molecules cycle among living and nonliving components of the biosphere	1				
SC 12.3.3.c Explain how distribution and abundance of different organisms in ecosystems are limited by the availability of matter and energy and the ability of the ecosystem to recycle materials	2				
SC 12.3.3.d Analyze factors which may influence environmental quality	2				
Grade 11 Biodiversity	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.3.4 Students will describe the theory of biological evolution.					**2-5**
SC 12.3.4.a Identify different types of adaptations necessary for survival (morphological, physiological, behavioral)	1				

SC 12.3.4.b Recognize that the concept of biological evolution is a theory which explains the consequence of the interactions of: (1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination of genes, (3) a finite supply of the resources required for life, and (4) the ensuing selection by the environment of those offspring better able to survive and leave offspring	1				
SC 12.3.4.c Explain how natural selection provides a scientific explanation of the fossil record and the molecular similarities among the diverse species of living organisms	2				
SC 12.3.4.d Apply the theory of biological evolution to explain diversity of life over time	2				
EARTH AND SPACE SCIENCE					
Grade 11 Earth in Space	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.4.1 Students will investigate and describe the known universe.					**2-4**
SC 12.4.1.a Describe the formation of the universe using the Big Bang Theory	1				
SC 12.4.1.b Recognize that stars, like the Sun, transform matter into energy by nuclear reactions which leads to the formation of other elements	1				
SC 12.4.1.c Describe stellar evolution	1				
Grade 11 Earth Structures and Processes	DOK Level	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.4.2 Students will investigate the relationships among Earth's structure, systems, and processes.					**3-5**
SC 12.4.2.a Recognize how Earth materials move through geochemical cycles (carbon, nitrogen, oxygen) resulting in chemical and physical changes in matter	1				
SC 12.4.2.b Describe how heat convection in the mantle propels the plates comprising Earth's surface across the face of the globe (plate tectonics)	2				
SC 12.4.2.c Evaluate the impact of human activity and natural causes on Earth's resources (groundwater, rivers, land, fossil fuels)	2				

Grade 11 Energy in Earth's Systems	DOK Level	DOK 1	DOK 2	DOK 3	Item Total
SC 12.4.3 Students will investigate and describe the relationships among the sources of energy and their efforts on Earth's systems.					**3-5**
SC 12.4.3.a Describe how radiation, conduction, and convection transfer heat in Earth's systems	1				
SC 12.4.3.b Identify internal and external sources of heat energy in Earth's systems	2				
SC 12.4.3.c Compare and contrast benefits of renewable and nonrenewable energy sources	2				
SC 12.4.3.d Describe natural influences (Earth's rotation, mountain ranges, oceans, differential heating) on global climate	2				
Grade 11 Earth's History	**DOK Level**	**DOK 1**	**DOK 2**	**DOK 3**	**Item Total**
SC 12.4.4 Students will explain the history and evolution of Earth.					**2-5**
SC 12.4.4.a Recognize that in any sequence of sediments or rocks that has not been overturned, the youngest sediments or rocks are at the top of the sequence and the oldest are at the bottom (law of superposition)	1				
SC 12.4.4.b Interpret Earth's history by observing rock sequences, using fossils to correlate the sequences at various locations, and using data from radioactive dating methods	2				
SC 12.4.4.c Compare and contrast the physical and biological differences of the early Earth with the planet we live on today	2				

Appendix E: Confidentiality Agreement

NEBRASKA DEPARTMENT OF EDUCATION

NEBRASKA STATE ACCOUNTABILITY

_____, _____

MONTH YEAR

CONFIDENTIALITY AGREEMENT

TEST SECURITY IS OF THE UTMOST IMPORTANCE TO THE NEBRASKA DEPARTMENT OF EDUCATION. AS A PARTICIPANT IN THIS _____, YOU HAVE ACCESS TO TEST ITEMS THAT MUST BE REGARDED AS CONFIDENTIAL. **DO NOT REPRODUCE ANY MATERIALS, DIRECTLY OR INDIRECTLY, DISCLOSE THE CONTENTS OF THESE MATERIALS, OR DISCUSS THE MATERIALS OR ANY ISSUES THAT ARISE DURING THE MEETINGS WITH INDIVIDUALS OUTSIDE OF THE MEETING ITSELF.**

WE ARE CERTAIN THAT YOU SHARE OUR CONCERN FOR TEST SECURITY AND ASK THAT YOU ACKNOWLEDGE YOUR ADHERENCE TO THIS AGREEMENT BY SIGNING BELOW.

_____ _____ _____

LEGAL FIRST NAME *MI* *LEGAL LAST NAME*

_____

SCHOOL

_____ _____

SIGNATURE *DATE*

Appendix F: Fairness in Testing Manual

FAIRNESS IN TESTING

Guidelines for Training

Bias, Fairness, and Sensitivity Issues

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INTRODUCTION

The most important part of the development of any new test is to ensure balanced treatment and control of potential bias, stereotyping, and insensitivity in the items or in the test-related materials. Data Recognition Corporation (DRC) understands that the presence of any type of bias in a test is undesirable not only from a civil rights point of view, but also from a measurement point of view. Issues of bias, fairness, and sensitivity in testing can have a direct impact on test scores. Our test developers are committed to the development of items and tests that are fair for all students. At every stage of the item and test development process, we employ procedures that are designed to ensure that our items and tests meet Standard 7.4 of the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999).

> Standard 7.4: Test developers should strive to identify and eliminate language, symbols, words, phrases, and content that are generally regarded as offensive by members of racial, ethnic, gender, or other groups, except when judged to be necessary for adequate representation of the domain.

In meeting Standard 7.4, DRC employs a series of internal quality steps that we believe are among some of the best in the industry. We provide specific training for our test developers, item writers, and reviewers on how to write, review, revise, and edit items for issues of bias, fairness, and sensitivity, as well as for technical quality. Our training also includes an awareness of and sensitivity to issues of cultural diversity.

In addition to providing *internal* training in reviewing items in order to eliminate potential bias, we also provide *external* training to our clients, including state departments of education, review panels of minority experts, teachers, and other stakeholders. DRC understands the importance of having external panels with a wide variety of expertise in reviewing items and tests for potential bias. External panels of professionals provide a review of items for subtle forms of bias that often can be perceived only by individuals who possess a wide variety of appropriate expertise and represent specific constituencies.

This manual has been prepared to summarize DRC's guidelines for bias, fairness, and sensitivity, including how to eliminate language, symbols, words, phrases, and content that might be considered offensive by members of racial, ethnic, gender, or other groups. Our guidelines may be modified to meet client's requirements and/or state-specific guidelines.

DEFINITION OF BIAS

While there are many definitions of bias, the following definition is provided on page 76 of the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999):

> The term *bias* in tests and testing refers to construct-irrelevant components that result in systematically lower or higher scores for identifiable groups of examinees. In other words, **bias is the presence of some characteristic of an item and/or test that results in two individuals of the same ability but from different subgroups performing differently on the item and/or test.** Therefore, it is most important that there are no ambiguities in the test items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries.

TYPES OF BIAS

There are many types of bias. They include stereotyping and discriminating against people because of gender, regional or geographical differences, ethnicity or culture, socioeconomic or class status, religion, or age, as well as bias against other groups of people, including those with disabilities. Another form of bias involves the use of questions and/or activities in the items or on a test as a whole that are not relevant to the life experiences of the students responding to the items or test. A definition of each type of bias, along with samples, is provided below.

STEREOTYPING

"Stereotype is an image formed by ascribing certain characteristics (e.g., physical, cultural, personal, occupational, historical) to all members of a group" (National Evaluation Systems, Inc. page 2). Stereotyping in test items and tests might include physical characteristics, intellectual characteristics, emotions, careers, activities, and domestic or social roles. In writing or reviewing test items, it is very important that all groups are portrayed fairly, without stereotyping. As a result, there should be a range of characteristics, careers, and social roles across all groups, and no one group should be characterized by any one particular attribute or characteristic. Following are examples of stereotyping.

Stereotype	***Examples***
PHYSICAL CHARACTERISTICS	MALES ARE STRONG AND CAPABLE LEADERS. Females are weak.

Types of Bias

Stereotyping (continued)

	The elderly are feeble and sickly. Children are healthy and full of energy. The elderly are dependent upon others. People with disabilities are dependent upon others. Females worry about their hair.
Intellectual characteristics	Males do better in mathematics and science. Females do better in reading and language arts. Asian Americans excel in academics.
Emotions	Males are aggressive, courageous, and strong. Females are weak, weepy, tender, and fearful.

Stereotyping	***Examples***
Careers	Females are nurses, teachers, and secretaries. Males are doctors, principals, superintendents, lawyers, and skilled laborers (e.g., plumbers, construction workers, painters). African-Americans are athletes. Hispanics operate lawn care businesses. Asian-Americans own dry cleaning businesses.
Activities	Females play with dolls and read books. Females do domestic chores (e.g., clean house, cook, sew). Females spend money. Males play sports and work with tools. Boys are rowdy. Girls are quiet.
Domestic and/or Social Roles	Females are responsible for childcare. Men work outside of the home and are the breadwinners.
Community	Asian-Americans live in ethnic neighborhoods. African-Americans live in high-rise apartment buildings located in urban areas. American Indians live on reservations.
Leadership	Men are leaders and rulers.

Women are followers.
Women are dependent on men.
Men are elected to political positions.
Females in leadership roles are aggressive and pushy.

TYPES OF BIAS (CONTINUED)

GENDER BIAS

Gender bias involves items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries that show members of either sex in stereotypical activities, emotions, occupations, characteristics, and/or situations. Gender bias also involves the use of demeaning labels.

Examples of gender bias

TITLES AND SPECIFIC TERMS REFERRING TO HUMANITY AT LARGE, SUCH AS

- Mankind
- Manhood
- Manpower
- Man of the hour
- Man-hours
- Man-made

Use of gender specific terms for occupations, such as

- Fireman
- Workman
- Chairman
- Policeman
- Mailman
- Salesman
- Insurance man
- Businessman
- Congressman

Use of pronouns that imply a stereotype, such as

- The nurse went to the hospital, and *she* was able to talk with the patient.
- The factory worker needed to earn more money for *his* family.
- When the lawyer delivered *his* closing remarks, the jury listened carefully.
- A politician must give a lot of speeches when *he* runs for office.

TYPES OF BIAS

GENDER BIAS (CONTINUED)

Use of phrases that identify genders in terms of their roles or occupations, such as

- Men and girls were invited to the lecture.
- The travelers took their wives and children with them.
- The happy couple was introduced as man and wife.

Use of phrases or words with an emphasis on marital status, such as

- Abraham Lincoln and Mrs. Lincoln attended the play.
- George Washington and Martha visited the new building.
- Dr. and Mrs. Jones attended the opening of the new warehouse.
- The admirable Dr. George Halstead and his wife, Maria, visited the library.

Use of words that identify genders in the salutation of a business letter, such as

- Dear Sir:
- Dear Madam:
- Dear Gentlemen:

Use of words or phases that are not parallel, such as

- The girls' restroom is down the hall, and the men's restroom is on the second floor.
- The boys' locker room door is painted green, and the women's locker room door is painted yellow.
- The men's department is on the right; the ladies' department is on the left.

Use of figures of speech, such as

- Old wives' tale
- Right-hand man
- Man versus nature
- The best man for the job
- The better half

Use of gender-specific terms or diminutive words, such as

- Sweet young thing
- Usherette
- Housewife
- Maid
- Cleaning lady
- Little woman
- Career girl
- Houseboy
- Steward

Regional or Geographical Bias

Regional and/or geographical bias involves items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries that include terms that are not commonly used nationwide or within a particular region or state to which the test will be given. It also involves the use of terms that have different connotations in different parts of the country and/or geographical regions. It is important to note that some experiences may not be common to all students. For example, within a given geographic area not all students might be familiar with snow, so questions involving sleds and toboggans, for example, may well reflect a regional or geographical bias.

Examples of regional or geographical bias

- She ordered a new davenport (couch or sofa).
- Go get your toboggan (hat or type of sled).
- The students stood in line at the bubbler (water fountain or drinking fountain).
- Turn left at the berm (curb).
- Take the pike (road).

Ethnic or Cultural Bias

Ethnic bias involves items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries that include terms that are demeaning and/or offensive to a particular ethnic group or culture. In addition, no minority group should be portrayed as being uneducated or poor.

Examples of ethnic or cultural bias

- Maria was in the kitchen making tacos.
- The Chinese owned a laundry in our area.
- Native Americans are very close to nature.

Terminology

Terms that have a negative connotation or that reinforce negative judgments should also be avoided. Following is a list of **acceptable** terms.

- African-American
- Asian-American or Pacific Island American
- Latino, Mexican-American, Hispanic
- Tribal name (preferred), Native American, American Indian
- European-American

Socioeconomic or Class Bias

Socioeconomic or class bias involves items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries that include activities, possessions, or ideas that may not be common to all students within a given area. For example, not all students in a given area own CD players or video games, nor do all students in a given area participate in certain sports activities, such as golf, snow skiing, or sailing. In addition, not all students in a given area take expensive vacations or attend expensive schools.

Examples of socioeconomic or class bias

- They were members of the country club.
- Boarding school.
- How many golf balls landed in the lake?
- The club members plan to go snow skiing over the holidays.
- My great aunt lives in a town house overlooking Lake Michigan.

Religious Bias

Religious bias involves items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries that include terms that are demeaning and/or offensive to a particular religious group.

Examples of religious bias

- The house on Smith Street is decorated for Halloween.
- There were several Christmas trees in the window.
- The students in the class will stand and say the *Pledge of Allegiance*.
- The high school students will be attending a rock-and-roll dance at the community center.

It is also important to note that no religious belief or practice should be portrayed as a universal norm or as inferior or superior to any other.

Ageism (Bias Against a Particular Age Group)

There are other subtle forms of bias, including bias against the elderly or ageism. Ageism involves items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries that include terms that are demeaning and/or offensive to the elderly or older persons (65 years or older). Ageism can also involve issues of bias with other age groups, including teenagers and young children.

It is important to note, however, that representing older persons or any age group fairly does not mean that the content of the items has to be revised or rewritten to seem unrealistic. Rather, as a whole, the items and the test should show older people or any age group in a variety of roles and activities whenever they appear naturally in the test content.

Examples of ageism (bias against a particular age group)

- Despite the fact that she was very old, she was able to walk down the stairs.
- The child's grandfather seemed senile.
- They were acting like typical irresponsible teenagers.

Bias Against Persons with Disabilities

Another form of subtle bias involves issues of bias related to persons with disabilities. This type of bias involves items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries that include terms that are demeaning and/or offensive to persons with disabilities. It is important to note, however, that representing persons with disabilities does not mean that the content of the items has to be revised or rewritten to seem unrealistic. Rather, as a whole, the items and the test should show people with disabilities in a variety of roles and activities whenever they appear naturally in the test content.

Examples of bias against persons with disabilities

- After the car accident, the student was confined to a wheelchair.
- He became a successful writer despite his disability.
- She is a blind person.
- The student is handicapped.
- The child made great strides in overcoming her disability.

TYPES OF BIAS

Bias Against Persons with Disabilities (continued)

Terminology

Terms that have a negative connotation or that reinforce negative judgments (crippled, victim, afflicted, confined, etc.) should also be avoided. It is also important that no one with a disability should be pictured as helpless or portrayed as pitiful.

Do not use	*Use*
Retarded	Developmentally delayed
Hard of hearing	Hearing impaired
Deaf and Dumb or Deaf-mute	Deaf or hard-of-hearing used accurately
Learning-disabled	Person with a learning disability
Handicap	Disability
	Visually-impaired or Blind used accurately

EXPERIENTIAL BIAS

The questions and activities reflected in the items or test, as a whole, should also be relevant to the life experiences of the students responding to the items. In other words, for a student to respond sensibly to the test questions, he or she must know what the question is about. In addition, culturally specific knowledge should be avoided, along with the use of difficult words and figures of speech.

Examples of experiential bias

- Pat knew she would win the race as she had an ace up her sleeve.
- Put the pedal to the metal and clean up your room.
- I needed change for the subway turnstile.
- The arroyos filled quickly during the storm.
- The super takes care of cleaning the foyer.

MAINTAINING BALANCE

Bias may also occur as a result of having a lack of balance through underrepresentation of a particular ethnic group and/or gender. Therefore, whenever possible, tests and test-related materials should contain content that is balanced across ethnic groups and across gender. The content of the pool of items and/or test, as a whole, should also reflect cultural diversity. In order to achieve balance, the test developers at DRC review the pool of items or the test, as a whole, to determine whether or not there is an adequate representation of

- Females and males in both traditional and nontraditional roles
- Female and male names
- Minority groups in various environments and occupations
- Minority groups, including the use of names

The issue of fairness also involves content inclusiveness. Subtle forms of bias can result from omitting certain areas of information and/or from omitting certain topics. Wherever possible, the content should show people in everyday situations and groups should be depicted as fully integrated in the society, reflecting the diverse multicultural composition of society as a whole (NES, page 9).

TOPICS TO AVOID

Because issues of bias, fairness, and sensitivity in testing can have a direct impact on the test scores, it is also important that sensitive and offensive topics be avoided. A topic might be considered offensive or controversial if it offends teachers, students, parents, or the community at large. This includes highly charged and controversial topics such as abortion, the death penalty, and evolution. Unacceptable content might also include less controversial topics, such as the use of tobacco or topics that could evoke unpleasant emotions on the part of a given student. In addition, topics that appear to promote or defend a particular set of values should be avoided. It is important to remember that the ability of the student to take the test should never be undermined. Following are examples of topics generally to be avoided.

Examples of topics to be generally avoided

- *ABORTION*
- Alcohol, including beer and wine
- Behaviors that are inappropriate, including stealing, cheating, lying, and other criminal and/or anti-social behaviors and activities
- Biographies of controversial figures whether or not they are still alive
- Birthdays
- Cancer and other diseases that might be considered fatal (HIV, AIDS)
- Criticism of democracy or capitalism
- Dangerous behavior
- Death of animals or animals dying or being mistreated
- Death, murder, and suicide
- Disasters, including tornadoes, hurricanes, etc. (unless treated as scientific subjects)
- Disrespect of any mainstream racial or religious group
- Double meanings of words that have sexually suggestive meanings
- Evolution
- Family experiences that may be upsetting, including divorce or loss of a job
- Feminist or chauvinistic topics
- Gambling
- Guns and gun control
- Holidays of religious origin (e.g., Halloween, Christmas, Easter)
- Junk food, including candy, gum, chips
- Left- or right-wing politics
- Luxuries (homes with swimming pools, expensive clothes, expensive vacations, and sports activities that typically require the purchase of expensive equipment such as snow skiing)
- Parapsychology

  - Physical, emotional, and/or mental abuse, including animal, child, and/or spousal abuse
- Religions, except in appropriate historical context; mythology, folk tales, and fables may contain religious elements as part of appropriately presented literary excerpts.
- Sex, including kissing and dating
- Slavery (unless presented in an historical context and presented appropriately)
- Tobacco
- Violence against a particular group of people or animals
- Rock music, including rap and heavy metal
- Wars
- Witchcraft, sorcery, or magic
- Words that might be problematic to a specific ethnic group

SPECIAL CIRCUMSTANCES

In certain subject areas, a sensitive topic may be acceptable because the topic is a part of the course of study or may be required in order to measure the specific curriculum content standards and/or test objectives. For example, it may be appropriate to have test questions dealing with hurricanes. However, the questions should not focus unduly upon the destruction of property or the deaths of human beings. Other special circumstances include historical and literary contexts. A discussion of these special circumstances is provided below.

Historical Contexts

In order to measure the content curriculum standards, social studies tests often include topics that might otherwise be deemed as controversial. For example, in a history test, the topic of slavery might be used. The student would know that such a controversial topic is used to access knowledge of a particular curriculum content standard and/or set of objectives and, therefore, the topic would not reflect the views of the test developer.

Literary Contexts

Today's tests often require the use of authentic or previously published passages. As a result, sometimes a given passage or prompt might contain controversial material, including sentences, phrases, and/or words. If the overall passage or prompt is acceptable, it may be possible to edit and or delete the objectionable sentences, phrases, words, and/or references in order to eliminate the potential bias. In such cases, DRC test developers request permission from the publisher to make such edits and/or changes, and they would do so only if permission is granted.

Points to Remember

When reviewing items (questions and responses), passages prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries for issues of bias, fairness, and sensitivity, the following questions should be asked.

1. Do the items (questions and responses), passages, prompts, stimulus materials, artwork, graphs, charts, and test-related ancillaries:

   Demean any religious, ethnic, cultural, or social group?
   Portray anyone or any group in a stereotypical manner?
   Contain any other forms of bias, including gender, regional or geographical, ethnic or cultural, socioeconomic or class, religious, age-related bias, or bias against persons with disabilities?

2. Are there any topics that might disadvantage a student for any reason?

3. Are there any culturally specific sets of knowledge, terms, difficult words and/or figures of speech that might disadvantage a group of students?

4. Are the questions and activities reflected in the items or test, as a whole, relevant to the life experiences of the students responding to the items?

5. As a whole, does the test or pool of items have a balance across ethnic groups and across genders, including an adequate representation of:

   Females and males in both traditional and nontraditional roles
   Female and male names
   Minority groups in various environments and occupations
   Minority groups, including the use of ethnic names

6. Wherever possible, does the content show minority groups in everyday situations and groups depicted as fully integrated in the society, reflecting the multicultural composition of society as a whole?

Sample Review Form

Name: _____

Date: _____

Subject Area: _____ **Grade Level:** _____

Item No.	Type of Bias							
	Gender	Regional	Ethnic	Socio-economic	Religious	Age	Exper-iential	Other

Comments:

_____

Appendix F References

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APPENDIX G: OVERVIEW OF RASCH MEASUREMENT

Most psychometricians agree that, when possible, the Rasch model is the preferred approach to manage the assessment and reporting processes (Rasch, 1960; Wright & Stone, 1979; Smith & Smith, 2004; Mead, 2008). For non-statisticians, the most compelling reasons may be that the Rasch model:

- is simple to apply, and
- preserves the number-correct ordering.

Simplicity makes the methods (relatively) easy to explain and the results to interpret. The results are straightforward and readily defended in front of administrators, parents, educators, and courts. And nontrivially, the simplicity helps meet the increasingly demanding time lines for reporting.

With number-correct scoring, students with more correct responses are always considered more proficient than students with fewer correct. This is intuitively obvious, based on more than a century of experience using and interpreting such scores.

For statisticians, the attractions of the Rasch model are more esoteric, including:

- an interval scale of measurement,
- meaningful estimates of the standard errors at each raw score, and,
- simple sufficient statistics for person and item parameters.

The interval scale makes it possible to construct a ruler and place the students and the items on the same ruler, along with any performance expectations or normative information. A difference of, say, 10 scale score units will have the same meaning at any point along the scale and will have the same implications when comparing a student to earlier assessments, to an item, to normative information, to expectations, to a growth target, or to another student.

The sufficient statistics are essential to the simplicity. They make it possible to derive estimation equations for person parameters that do not involve the item parameters and for the item parameters that do not involve person parameters. It does not matter which items are used for the assessment or which students are used for the calibration, given the items are appropriate for the students.

Still more compelling, once the sufficient statistics have been extracted, there is nothing remaining in the data that is directly relevant to the measurement. Any residual information can be used to control and monitor the model. The residuals contain diagnostic information about the student's performance on specific items or clusters of items.

The model does, however, place special demands on the item development and test construction processes. In essence, the model requires that all items, while imperfect, be equally valid and reliable instances of the construct. When sufficient care is taken in item and test development, most achievement test data can adequately satisfy the demands of the model and help realize its advantages of valid measurement, quality control, and effective, timely reporting.

The Rasch Philosophy of Measurement

George Rasch (1960), to derive data that he considered worthy of the name measurement, reasoned that the interaction between the person and the item must be governed by a single person parameter (ability) and a single item parameter (difficulty). If person *A* has more ability than person *B*, then *A* is more likely than *B* to answer any item correctly. If item *i* is more difficult than item *j*, then any person is less likely to answer item *i* correctly. These two common sense assertions are axiomatic to Rasch Measurement and must hold regardless of any other characteristics of the people or the items.

This reasoning led Rasch to the simple logistic model, which had several very useful and closely related properties touched on above (Rasch, 1960, 1977):

- *Simplicity*, which allows straightforward calculations, ready communication, and interpretation of the measures (Wright & Stone, 1979),
- *Separability* of the model parameters (Rasch, 1960),
- *Sufficiency* that does not involve the parameters (Andersen, 1977),
- *Specific objectivity*, sometimes called *person-free[d]* calibration and *item-free[d]* measurement (Wright, 1968), and

Specific objectivity means that the estimation equations for ability do not involve the difficulty parameters, and the equations for difficulty do not involve the ability parameters. Specific objectivity is possible when *sufficient statistics* for the parameters exist. The sufficient statistics exist because the parameters are *separable* in the model.

In practical terms, the students can be ordered on the measurement continuum by their number correct scores and the items can be ordered on the same continuum by the number of correct responses. No other information is necessary for the measurement and anything remaining in the data can be used to control and monitor fit to the model. Specific objectivity is the cornerstone of the Rasch family of measurement models (Wright & Mok, 1980).

THE MODEL FOR MEASUREMENT

Dichotomous Items

Multiple-choice items (MC) are calibrated using the most familiar form of the model (Rasch, 1960; Wright & Panchapakesan, 1969; Wright & Stone 1979; Andrich, 1988; Fischer & Molenaar, 1995; Smith & Smith, 2004). The Rasch model applicable to dichotomously scored items, given person ability and item difficulty, can be seen in the basic statement of the model.

The probability of success for a person with ability β_v on an item with difficulty δ_i is a function of the difference between the ability of the person and the difficulty of the item; mathematically:

1. $$P(right \mid \beta_v, \delta_i) = \frac{e^{\beta_v - \delta_i}}{1 + e^{\beta_v - \delta_i}} = \frac{\mathrm{B}_v}{\mathrm{B}_v + \Delta_,}, \text{ where } \mathrm{B}_v = e^{\beta_v} \text{ and } \Delta_i = e^{\delta_i}.$$

This is the probability of scoring one rather than zero on an item for which those are the only possibilities. This expression results in the familiar S-shaped curve relating the ability-difficulty metric to number correct score. Its simplicity makes it especially suited for educational assessment by drawing a clear distinction between the information (captured in the parameter estimates by the sufficient statistics) relevant to estimating the ability property that all examinees share and the information relevant to describing unique characteristics of individuals.

The model returns the identical estimated ability for every student with the same number correct score on a form. In the estimation phase, there is no distinction between the student who passes the easy item and misses the difficult items and the student who misses the easy items and passes the difficult ones. At the control and diagnostic stage, there is a great deal of difference between the two situations. In the first, there is a very clear statement of the person's true location on the construct; in the second, there are two very different statements when the two halves of the test are viewed separately.

This is the stage at which Rasch focuses his concern for the control of the model. The model itself provides a probability statement about any outcome. Typically, one examines the residuals, which can be expressed as the odds against the observed response. When these are collected and dissected, the conclusion for the first student would be nothing surprising occurred; for the second student, most of the responses were surprising. This diagnostic information can be put to good use when reporting and interpreting the test scores.

The strong measurement model is the instrument for understanding the scores, whether it concludes the student was accurately and validly measured or not. It will help lead the teacher and students to the most appropriate next steps.

CALIBRATION: ESTIMATING ITEM DIFFICULTIES

DRC uses the Rasch measurement model to estimate the student proficiencies and to control the assessment process. The model provides straightforward algorithms to compute ability estimates on a unidimensional, equal-interval scale of measurement from the number correct scores.

WINSTEPS (2012) implements the joint maximum likelihood estimation procedure (Linacre, 2012) for estimating item difficulties. This calibration software is commercially available and widely used in the testing industry. In addition to performing item calibration and ability estimation, the capabilities of the WINSTEPS program will be utilized to assess unidimensionality, item interdependence, and other deviations from the model. The program also has several options for exploring the person-item residual matrix (Mead, 1976, 2008; Ludlow 1986; Smith, 2000).

In the simplest formulation, estimating either the item difficulty or the person ability involves solving the fundamental equation that states the observed score must equal the expected score. For example, the ability estimate for a person who scores *r* on a set of *L* items is derived from:

2. $r_v = \sum_{i=1}^{L} \sum_{k=0}^{m_i} k\hat{P}_{vik}$, where $\hat{P}_{vik}$ is defined by (1) with estimates replacing the parameters.

Rasch calibration and scaling have become relatively routine operations. Members of the DRC psychometric staff have been instrumental in the development of the Rasch model and its application over several decades and are intimately familiar with the software for its application.

Appendix H: Reading Key Verification and Foil Analysis

Grade 3

Grade 3 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
OP	562968	22191	.89	.03	.04	.89	.03	.00	.00	.45	-.25	-.25	.45	-.23
OP	562972	22191	.84	.08	.03	.05	.84	.00	.00	.42	-.22	-.24	-.23	.42
OP	562976	22191	.84	.04	.08	.04	.84	.00	.00	.48	-.24	-.27	-.27	.48
OP	562987	22191	.72	.11	.08	.72	.09	.00	.00	.53	-.28	-.26	.53	-.26
OP	562989	22191	.61	.61	.06	.12	.20	.00	.00	.43	.43	-.27	-.23	-.17
OP	562990	22191	.84	.05	.04	.07	.84	.00	.00	.40	-.17	-.20	-.25	.40
OP	562991	22191	.88	.07	.02	.03	.88	.00	.00	.35	-.16	-.21	-.21	.35
OP	562992	22191	.59	.05	.59	.28	.08	.00	.00	.42	-.22	.42	-.22	-.20
OP	562995	22191	.57	.13	.57	.12	.18	.00	.00	.37	-.18	.37	-.18	-.16
OP	563004	22191	.63	.05	.29	.03	.63	.00	.00	.54	-.23	-.39	-.16	.54
OP	563018	22191	.83	.05	.83	.02	.10	.00	.00	.48	-.26	.48	-.20	-.31
OP	563021	22191	.69	.05	.17	.09	.69	.00	.00	.38	-.26	-.22	-.12	.38
OP	563022	22191	.60	.19	.17	.04	.60	.00	.00	.40	-.25	-.14	-.22	.40
OP	565104	22191	.67	.12	.10	.67	.11	.00	.00	.47	-.19	-.22	.47	-.29
OP	565114	22191	.81	.81	.02	.14	.02	.00	.00	.45	.45	-.23	-.31	-.20
OP	602276	22191	.59	.12	.59	.04	.25	.00	.00	.36	-.34	.36	-.25	-.04
OP	602277	22191	.74	.74	.11	.08	.05	.00	.00	.52	.52	-.31	-.23	-.25
OP	602278	22191	.49	.05	.49	.09	.37	.00	.00	.32	-.16	.32	-.23	-.11
OP	602279	22191	.67	.16	.67	.13	.03	.00	.00	.44	-.19	.44	-.28	-.21
OP	602281	22191	.75	.12	.08	.75	.05	.00	.00	.53	-.33	-.25	.53	-.24
OP	602289	22191	.70	.12	.11	.06	.70	.00	.00	.38	-.27	-.09	-.23	.38
OP	602325	22191	.86	.05	.05	.03	.86	.00	.00	.36	-.19	-.23	-.18	.36
OP	602326	22191	.73	.73	.06	.08	.13	.00	.00	.38	.38	-.22	-.16	-.21
OP	602332	22191	.75	.75	.06	.12	.07	.00	.00	.46	.46	-.24	-.33	-.12
OP	602333	22191	.57	.06	.57	.23	.13	.00	.00	.34	-.24	.34	-.09	-.20
OP	602337	22191	.77	.05	.09	.09	.77	.00	.00	.46	-.21	-.23	-.28	.46
OP	602341	22191	.73	.08	.11	.73	.07	.00	.00	.30	-.14	-.10	.30	-.22
OP	602343	22191	.70	.70	.10	.07	.13	.00	.00	.42	.42	-.14	-.16	-.31
OP	602348	22191	.57	.14	.57	.19	.10	.00	.00	.46	-.18	.46	-.28	-.16
OP	602354	22191	.79	.08	.79	.07	.06	.00	.00	.50	-.29	.50	-.25	-.23
OP	602356	22191	.48	.13	.29	.10	.48	.00	.00	.18	-.10	-.01	-.15	.18
OP	632655	22191	.74	.06	.08	.12	.74	.00	.00	.29	-.23	-.11	-.13	.29
OP	632660	22191	.78	.06	.78	.06	.11	.00	.00	.49	-.20	.49	-.23	-.32
OP	632661	22191	.80	.80	.09	.08	.03	.00	.00	.37	.37	-.20	-.19	-.20

Grade 3 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
OP	632663	22191	.51	.15	.14	.51	.21	.00	.00	.38	-.20	-.13	.38	-.16
OP	632665	22191	.66	.10	.66	.17	.07	.00	.00	.34	-.19	.34	-.14	-.18
OP	632669	22191	.87	.07	.02	.04	.87	.00	.00	.38	-.19	-.25	-.20	.38
OP	632716	22191	.55	.05	.30	.09	.55	.00	.00	.29	-.14	-.11	-.20	.29
OP	632719	22191	.86	.03	.86	.05	.06	.00	.00	.49	-.24	.49	-.24	-.31
OP	632720	22191	.65	.65	.16	.12	.08	.00	.00	.47	.47	-.33	-.10	-.25
OP	632721	22191	.69	.11	.11	.09	.69	.00	.00	.46	-.26	-.21	-.20	.46
OP	632722	22191	.55	.28	.09	.55	.08	.00	.00	.45	-.15	-.30	.45	-.25
OP	632723	22191	.55	.09	.55	.16	.19	.00	.00	.41	-.17	.41	-.24	-.15
OP	632724	22191	.73	.73	.12	.12	.03	.00	.00	.30	.30	-.17	-.12	-.21
OP	632727	22191	.62	.09	.09	.62	.20	.00	.00	.48	-.32	-.19	.48	-.22
FT	645588	7235	.42	.42	.32	.09	.17	.00	.00	.29	.29	-.05	-.17	-.17
FT	645589	7235	.47	.14	.47	.10	.29	.00	.00	.27	-.12	.27	-.14	-.09
FT	645590	7235	.63	.63	.16	.13	.07	.00	.00	.37	.37	-.12	-.24	-.18
FT	645591	7235	.60	.06	.27	.06	.60	.00	.00	.38	-.19	-.20	-.18	.38
FT	645592	7235	.52	.52	.16	.05	.27	.00	.00	.34	.34	-.17	-.19	-.12
FT	645593	7235	.24	.27	.24	.15	.34	.00	.00	.20	-.28	.20	.04	.08
FT	645594	7235	.73	.08	.12	.73	.07	.00	.00	.43	-.25	-.18	.43	-.23
FT	645595	7235	.16	.17	.16	.62	.04	.00	.00	-.04	-.16	-.04	.28	-.27
FT	645596	7235	.73	.13	.10	.73	.04	.00	.00	.52	-.34	-.24	.52	-.18
FT	645597	7235	.76	.03	.06	.14	.76	.00	.00	.37	-.22	-.20	-.17	.37
FT	645598	3673	.56	.13	.11	.21	.56	.00	.00	.36	-.10	-.11	-.28	.36
FT	645602	3673	.42	.38	.06	.42	.14	.00	.00	.33	-.13	-.19	.33	-.16
FT	645604	3673	.33	.26	.33	.22	.19	.00	.00	.12	.00	.12	-.01	-.13
FT	645605	3673	.60	.60	.05	.05	.29	.00	.00	.33	.33	-.15	-.18	-.19
FT	645606	3673	.72	.04	.04	.20	.72	.00	.00	.26	-.19	-.24	-.09	.26
FT	645608	3673	.59	.21	.59	.14	.07	.00	.00	.38	-.24	.38	-.13	-.17
FT	645609	3673	.82	.06	.82	.07	.05	.00	.00	.44	-.20	.44	-.32	-.18
FT	645610	3673	.40	.40	.22	.22	.16	.00	.00	.15	.15	-.05	-.07	-.07
FT	645611	3673	.63	.04	.06	.63	.27	.00	.00	.26	-.25	-.22	.26	-.06
FT	645613	3673	.62	.03	.25	.62	.10	.00	.00	.40	-.21	-.22	.40	-.21
FT	645614	3840	.90	.05	.03	.02	.90	.00	.00	.40	-.23	-.24	-.19	.40
FT	645615	3840	.62	.10	.62	.25	.04	.00	.00	.44	-.25	.44	-.23	-.20
FT	645616	3840	.33	.33	.27	.12	.29	.00	.00	.25	.25	-.10	-.25	.03
FT	645617	3840	.45	.45	.19	.11	.26	.00	.00	.31	.31	.05	-.10	-.32
FT	645618	3840	.36	.36	.36	.12	.16	.00	.00	.22	.22	.02	-.25	-.09
FT	645619	3840	.64	.07	.14	.64	.15	.00	.00	.49	-.23	-.23	.49	-.26
FT	645621	3840	.81	.03	.81	.07	.09	.00	.00	.41	-.22	.41	-.18	-.26
FT	645622	3840	.66	.19	.08	.07	.66	.00	.00	.29	.00	-.30	-.20	.29
FT	645623	3840	.43	.17	.13	.27	.43	.00	.00	.37	-.24	-.09	-.14	.37

Grade 3 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
FT	645624	3840	.66	.02	.12	.66	.20	.00	.00	.44	-.14	-.40	.44	-.15
FT	645625	3719	.65	.13	.06	.16	.65	.00	.00	.43	-.26	-.23	-.18	.43
FT	645627	3719	.91	.04	.91	.02	.03	.00	.00	.38	-.22	.38	-.19	-.22
FT	645629	3719	.80	.07	.80	.09	.04	.00	.00	.45	-.22	.45	-.26	-.26
FT	645632	3719	.89	.89	.04	.02	.06	.00	.00	.37	.37	-.21	-.16	-.24
FT	645633	3719	.89	.89	.03	.03	.05	.00	.00	.45	.45	-.18	-.27	-.28
FT	645634	3719	.86	.02	.01	.86	.10	.00	.00	.36	-.20	-.17	.36	-.25
FT	645635	3719	.89	.02	.06	.89	.03	.00	.00	.32	-.24	-.13	.32	-.21
FT	645636	3719	.64	.05	.64	.23	.08	.00	.00	.34	-.15	.34	-.16	-.24
FT	645637	3719	.73	.24	.73	.01	.01	.00	.00	.27	-.20	.27	-.17	-.14
FT	645638	3719	.46	.04	.02	.48	.46	.00	.00	.44	-.23	-.19	-.29	.44
FT	645640	3723	.71	.71	.09	.10	.09	.00	.00	.45	.45	-.22	-.21	-.26
FT	645641	3723	.41	.26	.41	.14	.18	.00	.00	.35	-.08	.35	-.27	-.12
FT	645642	3723	.70	.07	.12	.70	.11	.00	.00	.28	-.18	-.06	.28	-.21
FT	645643	3723	.89	.02	.89	.05	.04	.00	.00	.39	-.22	.39	-.22	-.23
FT	645644	3723	.73	.03	.73	.09	.15	.00	.00	.46	-.21	.46	-.17	-.34
FT	645645	3723	.51	.13	.10	.26	.51	.00	.00	.42	-.11	-.27	-.21	.42
FT	645646	3723	.81	.10	.07	.81	.03	.00	.00	.40	-.16	-.29	.40	-.22
FT	645651	3723	.63	.05	.07	.63	.25	.00	.00	.15	-.17	-.17	.15	.02
FT	645652	3723	.81	.06	.10	.03	.81	.00	.00	.40	-.25	-.21	-.21	.40
FT	645655	3723	.60	.60	.03	.35	.02	.00	.00	.35	.35	-.20	-.25	-.16

Grade 4

Grade 4 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
OP	563382	22014	.52	.02	.10	.52	.36	.00	.00	.41	-.21	-.19	.41	-.23
OP	563383	22014	.76	.15	.76	.04	.06	.00	.00	.50	-.37	.50	-.25	-.13
OP	563384	22014	.75	.75	.03	.15	.07	.00	.00	.49	.49	-.19	-.31	-.25
OP	563385	22014	.52	.52	.07	.25	.16	.00	.00	.37	.37	-.29	-.09	-.17
OP	563392	22014	.71	.71	.24	.02	.03	.00	.00	.39	.39	-.29	-.17	-.14
OP	602395	22014	.58	.25	.58	.08	.08	.00	.00	.35	-.19	.35	-.07	-.23
OP	602396	22014	.78	.03	.16	.78	.02	.00	.00	.29	-.21	-.13	.29	-.20
OP	602399	22014	.87	.06	.04	.03	.87	.00	.00	.34	-.22	-.18	-.14	.34
OP	602400	22014	.65	.11	.10	.14	.65	.00	.00	.43	-.23	-.19	-.21	.43
OP	602432	22014	.72	.14	.09	.05	.72	.00	.00	.42	-.24	-.23	-.17	.42
OP	602435	22014	.66	.14	.04	.15	.66	.00	.00	.28	-.16	-.17	-.11	.28
OP	602436	22014	.59	.13	.16	.59	.12	.00	.00	.45	-.20	-.16	.45	-.28

Grade 4 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
OP	602442	22014	.69	.69	.02	.04	.25	.00	.00	.38	.38	-.17	-.25	-.23
OP	602443	22014	.77	.05	.77	.05	.13	.00	.00	.44	-.24	.44	-.25	-.22
OP	602446	22014	.66	.15	.11	.08	.66	.00	.00	.31	-.25	-.04	-.14	.31
OP	602447	22014	.60	.60	.22	.13	.05	.00	.00	.49	.49	-.23	-.27	-.22
OP	602449	22014	.60	.14	.10	.16	.60	.00	.00	.43	-.18	-.18	-.25	.43
OP	602452	22014	.82	.06	.04	.82	.07	.00	.00	.47	-.26	-.23	.47	-.25
OP	602455	22014	.70	.70	.15	.09	.07	.00	.00	.38	.38	-.10	-.21	-.31
OP	602456	22014	.70	.05	.21	.03	.70	.00	.00	.40	-.22	-.21	-.24	.40
OP	633012	22014	.63	.14	.63	.10	.14	.00	.00	.43	-.20	.43	-.22	-.20
OP	633013	22014	.58	.13	.19	.58	.09	.00	.00	.39	-.25	-.14	.39	-.14
OP	633014	22014	.70	.70	.23	.04	.02	.00	.00	.38	.38	-.22	-.27	-.14
OP	633017	22014	.72	.10	.72	.16	.02	.00	.00	.46	-.17	.46	-.33	-.21
OP	633021	22014	.36	.12	.27	.36	.25	.00	.00	.32	-.14	-.24	.32	.01
OP	633024	22014	.79	.07	.09	.05	.79	.00	.00	.39	-.21	-.16	-.25	.39
OP	633025	22014	.56	.13	.05	.25	.56	.00	.00	.35	-.18	-.21	-.13	.35
OP	633039	22014	.73	.73	.04	.03	.19	.00	.00	.49	.49	-.21	-.20	-.35
OP	633044	22014	.81	.05	.06	.81	.07	.00	.00	.40	-.29	-.17	.40	-.17
OP	633046	22014	.66	.19	.66	.08	.07	.00	.00	.28	-.02	.28	-.16	-.30
OP	633048	22014	.51	.10	.51	.25	.14	.00	.00	.36	-.19	.36	-.13	-.18
OP	633049	22014	.62	.07	.02	.62	.30	.00	.00	.37	-.17	-.19	.37	-.24
OP	633074	22014	.76	.14	.05	.06	.76	.00	.00	.44	-.26	-.23	-.19	.44
OP	633077	22014	.65	.07	.65	.22	.06	.00	.00	.42	-.16	.42	-.23	-.24
OP	633081	22014	.64	.64	.05	.23	.07	.00	.00	.37	.37	-.20	-.17	-.20
OP	633086	22014	.73	.13	.05	.10	.73	.00	.00	.47	-.28	-.21	-.23	.47
OP	633087	22014	.61	.04	.19	.16	.61	.00	.00	.34	-.21	-.14	-.19	.34
OP	633088	22014	.54	.17	.54	.03	.25	.00	.00	.39	-.07	.39	-.22	-.27
OP	633093	22014	.53	.27	.08	.53	.12	.00	.00	.35	-.16	-.25	.35	-.10
OP	633098	22014	.79	.12	.79	.05	.03	.00	.00	.36	-.24	.36	-.14	-.17
OP	633099	22014	.56	.10	.56	.21	.13	.00	.00	.36	-.24	.36	-.17	-.10
OP	633105	22014	.71	.21	.01	.07	.71	.00	.00	.32	-.17	-.14	-.22	.32
OP	633107	22014	.81	.81	.03	.09	.06	.00	.00	.34	.34	-.10	-.22	-.19
OP	633111	22014	.57	.10	.24	.09	.57	.00	.00	.40	-.18	-.15	-.27	.40
OP	633114	22014	.52	.14	.29	.52	.05	.00	.00	.36	-.23	-.09	.36	-.23
FT	645682	3622	.55	.33	.09	.03	.55	.00	.00	.30	-.11	-.19	-.25	.30
FT	645683	3622	.90	.03	.90	.02	.05	.00	.00	.38	-.19	.38	-.15	-.27
FT	645684	3622	.57	.19	.08	.57	.16	.00	.00	.42	-.23	-.24	.42	-.14
FT	645685	3622	.47	.15	.47	.04	.34	.00	.00	.19	-.14	.19	-.23	.00
FT	645686	3622	.52	.14	.18	.52	.16	.00	.00	.47	-.25	-.21	.47	-.19
FT	645688	3622	.80	.80	.06	.12	.02	.00	.00	.40	.40	-.18	-.28	-.17
FT	645689	3622	.22	.22	.42	.11	.25	.00	.00	.01	.01	.11	-.14	-.04

Grade 4 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
FT	645690	3622	.56	.12	.21	.11	.56	.00	.00	.43	-.16	-.24	-.20	.43
FT	645692	3622	.83	.08	.83	.03	.07	.00	.00	.35	-.21	.35	-.22	-.16
FT	645694	3622	.62	.01	.12	.25	.62	.00	.00	.13	-.12	-.13	-.01	.13
FT	645696	7298	.69	.19	.07	.69	.04	.00	.00	.38	-.26	-.12	.38	-.16
FT	645697	7298	.53	.02	.53	.27	.17	.00	.00	.19	-.17	.19	-.01	-.14
FT	645698	7298	.85	.04	.05	.05	.85	.00	.00	.44	-.22	-.26	-.21	.44
FT	645699	7298	.63	.63	.13	.14	.09	.00	.00	.30	.30	-.19	-.06	-.16
FT	645700	7298	.35	.35	.09	.49	.06	.00	.00	.14	.14	-.24	.13	-.20
FT	645701	7298	.49	.49	.25	.12	.13	.00	.00	.28	.28	.06	-.23	-.23
FT	645703	7298	.60	.09	.18	.60	.12	.00	.00	.38	-.14	-.15	.38	-.22
FT	645705	7298	.68	.23	.05	.04	.68	.00	.00	.14	.07	-.19	-.20	.14
FT	645706	7298	.81	.04	.81	.05	.09	.00	.00	.35	-.16	.35	-.23	-.15
FT	645711	7298	.76	.06	.76	.09	.09	.00	.00	.42	-.21	.42	-.17	-.24
FT	645726	3734	.62	.14	.06	.62	.19	.00	.00	.33	-.14	-.14	.33	-.21
FT	645729	3734	.46	.19	.46	.20	.15	.00	.00	.38	-.22	.38	-.11	-.18
FT	645730	3734	.91	.02	.04	.91	.03	.00	.00	.30	-.13	-.15	.30	-.21
FT	645731	3734	.91	.03	.04	.02	.91	.00	.00	.26	-.14	-.12	-.19	.26
FT	645732	3734	.65	.08	.65	.16	.11	.00	.00	.38	-.20	.38	-.12	-.25
FT	645734	3734	.47	.14	.47	.11	.27	.00	.00	.26	-.21	.26	-.19	.01
FT	645735	3734	.46	.46	.15	.22	.18	.00	.00	.46	.46	-.16	-.19	-.24
FT	645736	3734	.67	.67	.14	.13	.05	.00	.00	.49	.49	-.41	-.12	-.21
FT	645737	3734	.75	.06	.11	.07	.75	.00	.00	.36	-.19	-.23	-.14	.36
FT	645738	3734	.48	.20	.14	.48	.17	.00	.00	.30	.01	-.19	.30	-.24
FT	645792	3663	.32	.32	.17	.20	.31	.00	.00	.23	.23	-.07	-.14	-.05
FT	645794	3663	.47	.47	.26	.20	.06	.00	.00	.26	.26	-.19	-.01	-.17
FT	645795	3663	.73	.08	.73	.14	.05	.00	.00	.45	-.25	.45	-.24	-.23
FT	645796	3663	.75	.01	.13	.10	.75	.00	.00	.27	-.18	-.13	-.16	.27
FT	645799	3663	.49	.10	.16	.49	.25	.00	.00	.24	-.07	-.19	.24	-.06
FT	645800	3663	.64	.13	.14	.64	.10	.00	.00	.36	-.12	-.21	.36	-.20
FT	645801	3663	.86	.05	.04	.04	.86	.00	.00	.48	-.29	-.22	-.27	.48
FT	645802	3663	.74	.12	.11	.74	.03	.00	.00	.36	-.17	-.23	.36	-.17
FT	645805	3663	.80	.80	.05	.12	.02	.00	.00	.35	.35	-.26	-.17	-.16
FT	645806	3663	.84	.03	.84	.05	.08	.00	.00	.44	-.22	.44	-.24	-.25
FT	645808	3696	.41	.36	.41	.11	.13	.00	.00	.18	.04	.18	-.22	-.12
FT	645809	3696	.70	.70	.17	.08	.05	.00	.00	.28	.28	-.12	-.15	-.20
FT	645810	3696	.71	.19	.71	.05	.05	.00	.00	.43	-.27	.43	-.16	-.26
FT	645812	3696	.34	.34	.03	.63	.01	.00	.00	-.01	-.01	-.20	.10	-.14
FT	645813	3696	.67	.08	.67	.18	.07	.00	.00	.31	.06	.31	-.35	-.10
FT	645816	3696	.30	.42	.26	.30	.02	.00	.00	.22	-.07	-.09	.22	-.15
FT	645817	3696	.86	.06	.03	.05	.86	.00	.00	.38	-.19	-.21	-.23	.38

Grade 4 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
FT	645818	3696	.82	.01	.09	.82	.08	.00	.00	.19	-.15	-.12	.19	-.07
FT	645819	3696	.49	.18	.25	.08	.49	.00	.00	.34	-.13	-.15	-.19	.34
FT	645820	3696	.58	.20	.04	.58	.18	.00	.00	.45	-.19	-.23	.45	-.25

Grade 5

Grade 5 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
op	602462	21675	.51	.51	.15	.17	.17	.00	.00	.36	.36	-.25	-.16	-.07
op	602465	21675	.57	.10	.17	.16	.57	.00	.00	.39	-.23	-.11	-.21	.39
op	602467	21675	.50	.32	.13	.50	.05	.00	.00	.31	-.10	-.19	.31	-.20
op	602468	21675	.70	.12	.13	.70	.05	.00	.00	.41	-.23	-.24	.41	-.13
op	602469	21675	.73	.11	.12	.03	.73	.00	.00	.40	-.24	-.21	-.18	.40
op	602470	21675	.68	.68	.21	.05	.06	.00	.00	.38	.38	-.20	-.20	-.21
op	602484	21675	.48	.06	.11	.48	.35	.00	.00	.40	-.18	-.26	.40	-.15
op	602485	21675	.54	.24	.54	.11	.10	.00	.00	.35	-.12	.35	-.21	-.16
op	602488	21675	.74	.74	.03	.06	.17	.00	.00	.49	.49	-.26	-.13	-.36
op	602489	21675	.67	.06	.67	.11	.16	.00	.00	.46	-.25	.46	-.26	-.19
op	602490	21675	.87	.87	.04	.05	.05	.00	.00	.49	.49	-.21	-.29	-.27
op	602491	21675	.76	.10	.05	.08	.76	.00	.00	.40	-.22	-.22	-.18	.40
op	602492	21675	.78	.09	.08	.05	.78	.00	.00	.47	-.24	-.22	-.29	.47
op	602493	21675	.64	.08	.64	.22	.06	.00	.00	.46	-.27	.46	-.18	-.28
op	602495	21675	.61	.11	.10	.61	.17	.00	.00	.34	-.21	-.23	.34	-.07
op	602496	21675	.78	.12	.05	.05	.78	.00	.00	.47	-.28	-.24	-.21	.47
op	602498	21675	.43	.12	.17	.43	.28	.00	.00	.40	-.17	-.16	.40	-.19
op	602500	21675	.67	.67	.03	.10	.19	.00	.00	.40	.40	-.21	-.19	-.23
op	602501	21675	.62	.19	.12	.62	.08	.00	.00	.42	-.20	-.15	.42	-.29
op	602506	21675	.82	.82	.05	.09	.04	.00	.00	.49	.49	-.29	-.28	-.20
op	602509	21675	.76	.04	.15	.76	.05	.00	.00	.43	-.16	-.25	.43	-.26
op	602510	21675	.52	.18	.17	.13	.52	.00	.00	.26	-.13	-.09	-.12	.26
op	602511	21675	.80	.05	.80	.11	.04	.00	.00	.46	-.26	.46	-.26	-.21
op	602512	21675	.89	.89	.04	.04	.03	.00	.00	.46	.46	-.25	-.29	-.20
op	602513	21675	.68	.14	.10	.68	.08	.00	.00	.47	-.22	-.25	.47	-.23
op	633235	21675	.44	.14	.44	.09	.33	.00	.00	.35	-.32	.35	-.17	-.03
op	633238	21675	.70	.70	.16	.08	.06	.00	.00	.35	.35	-.17	-.21	-.16
op	633240	21675	.58	.29	.01	.58	.12	.00	.00	.44	-.31	-.16	.44	-.18
op	633241	21675	.48	.16	.23	.13	.48	.00	.00	.38	-.14	-.15	-.21	.38
op	633243	21675	.62	.13	.62	.06	.19	.00	.00	.35	-.10	.35	-.23	-.20

Grade 5 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
op	633244	21675	.82	.82	.04	.11	.02	.00	.00	.49	.49	-.25	-.32	-.20
op	633267	21675	.79	.09	.79	.03	.09	.00	.00	.45	-.25	.45	-.17	-.28
op	633272	21675	.72	.72	.04	.14	.10	.00	.00	.42	.42	-.22	-.16	-.30
op	633273	21675	.32	.13	.36	.19	.32	.00	.00	.30	-.19	-.12	-.05	.30
op	633274	21675	.76	.10	.04	.76	.10	.00	.00	.43	-.23	-.20	.43	-.25
op	633278	21675	.75	.75	.17	.06	.02	.00	.00	.40	.40	-.29	-.16	-.16
op	633281	21675	.57	.57	.14	.11	.18	.00	.00	.43	.43	-.30	-.26	-.06
op	633282	21675	.86	.04	.07	.03	.86	.00	.00	.47	-.26	-.26	-.24	.47
op	633283	21675	.83	.04	.09	.83	.04	.00	.00	.52	-.26	-.32	.52	-.24
op	633284	21675	.64	.23	.64	.07	.06	.00	.00	.36	-.21	.36	-.18	-.12
op	633287	21675	.78	.14	.04	.78	.04	.00	.00	.49	-.28	-.26	.49	-.26
op	633291	21675	.86	.03	.86	.05	.06	.00	.00	.39	-.20	.39	-.30	-.13
op	633293	21675	.70	.05	.09	.70	.16	.00	.00	.48	-.22	-.25	.48	-.26
op	633297	21675	.65	.10	.14	.10	.65	.00	.00	.35	-.17	-.23	-.11	.35
op	633299	21675	.62	.06	.22	.10	.62	.00	.00	.40	-.17	-.24	-.19	.40
op	633302	21675	.88	.04	.04	.88	.04	.00	.00	.40	-.22	-.21	.40	-.23
op	633303	21675	.84	.04	.84	.05	.07	.00	.00	.47	-.20	.47	-.28	-.28
op	633305	21675	.58	.20	.11	.58	.11	.00	.00	.37	-.14	-.13	.37	-.25
FT	645741	3762	.78	.17	.02	.78	.03	.00	.00	.26	-.10	-.20	.26	-.23
FT	645742	3762	.17	.31	.17	.23	.29	.00	.00	.10	.00	.10	-.05	-.03
FT	645744	3762	.66	.66	.10	.08	.16	.00	.00	.46	.46	-.17	-.22	-.29
FT	645745	3762	.82	.08	.82	.06	.03	.00	.00	.39	-.22	.39	-.22	-.19
FT	645746	3762	.78	.06	.14	.02	.78	.00	.00	.42	-.23	-.27	-.19	.42
FT	645747	3762	.68	.68	.05	.03	.24	.00	.00	.26	.26	-.27	-.21	-.06
FT	645750	3762	.77	.08	.01	.77	.14	.00	.00	.54	-.35	-.16	.54	-.33
FT	645751	3762	.84	.10	.04	.01	.84	.00	.00	.37	-.24	-.21	-.17	.37
FT	645752	3762	.88	.01	.08	.03	.88	.00	.00	.34	-.17	-.18	-.25	.34
FT	645754	3762	.54	.26	.02	.54	.19	.00	.00	.15	-.04	-.22	.15	-.08
FT	645755	3711	.47	.17	.16	.20	.47	.00	.00	.33	-.10	-.18	-.15	.33
FT	645756	3711	.82	.06	.05	.82	.07	.00	.00	.25	-.08	-.24	.25	-.09
FT	645757	3711	.62	.08	.14	.62	.16	.00	.00	.33	-.12	-.09	.33	-.26
FT	645758	3711	.90	.02	.90	.01	.07	.00	.00	.37	-.17	.37	-.17	-.28
FT	645760	3711	.40	.22	.30	.40	.09	.00	.00	.21	-.02	-.10	.21	-.17
FT	645761	3711	.85	.02	.04	.08	.85	.00	.00	.38	-.23	-.18	-.23	.38
FT	645762	3711	.72	.72	.09	.15	.04	.00	.00	.31	.31	-.12	-.17	-.24
FT	645763	3711	.63	.08	.63	.21	.09	.00	.00	.45	-.25	.45	-.22	-.22
FT	645764	3711	.67	.67	.10	.12	.12	.00	.00	.43	.43	-.13	-.26	-.26
FT	645767	3711	.24	.41	.24	.22	.13	.00	.00	.09	-.08	.09	.15	-.18
FT	645769	6729	.66	.66	.07	.13	.14	.00	.00	.42	.42	-.17	-.17	-.27

Grade 5 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-Value	A	B	C	D	-	*	Total	A	B	C	D
FT	645771	6729	.61	.04	.31	.61	.03	.00	.00	.23	-.20	-.06	.23	-.21
FT	645772	6729	.71	.13	.11	.05	.71	.00	.00	.47	-.24	-.22	-.26	.47
FT	645773	6729	.82	.05	.05	.82	.07	.00	.00	.42	-.23	-.23	.42	-.19
FT	645774	6729	.40	.20	.40	.13	.27	.00	.00	.34	-.19	.34	-.06	-.14
FT	645775	6729	.64	.64	.06	.22	.08	.00	.00	.35	.35	-.17	-.19	-.15
FT	645776	6729	.67	.13	.14	.05	.67	.00	.00	.35	-.13	-.20	-.21	.35
FT	645777	6729	.57	.57	.13	.12	.17	.00	.00	.43	.43	-.17	-.20	-.21
FT	645778	6729	.71	.12	.11	.05	.71	.00	.00	.43	-.17	-.25	-.22	.43
FT	645779	6729	.76	.08	.76	.07	.09	.00	.00	.37	-.19	.37	-.28	-.08
FT	645822	3755	.73	.08	.05	.73	.14	.00	.00	.45	-.30	-.23	.45	-.19
FT	645823	3755	.63	.63	.06	.07	.24	.00	.00	.35	.35	-.21	-.26	-.11
FT	645824	3755	.59	.13	.20	.07	.59	.00	.00	.36	-.16	-.13	-.26	.36
FT	645825	3755	.60	.09	.21	.60	.10	.00	.00	.36	-.26	-.12	.36	-.17
FT	645826	3755	.87	.87	.05	.05	.03	.00	.00	.42	.42	-.25	-.25	-.19
FT	645827	3755	.89	.04	.04	.89	.03	.00	.00	.43	-.25	-.24	.43	-.22
FT	645828	3755	.51	.35	.51	.08	.06	.00	.00	.34	-.14	.34	-.21	-.19
FT	645829	3755	.67	.07	.67	.22	.05	.00	.00	.44	-.20	.44	-.31	-.14
FT	645830	3755	.21	.26	.31	.22	.21	.00	.00	.17	-.09	.09	-.17	.17
FT	645833	3755	.84	.08	.02	.06	.84	.00	.00	.45	-.27	-.17	-.27	.45
FT	645837	3718	.30	.06	.30	.45	.20	.00	.00	-.06	-.19	-.06	.20	-.06
FT	645838	3718	.34	.10	.34	.05	.51	.00	.00	.07	-.08	.07	-.06	.01
FT	645839	3718	.68	.06	.21	.68	.05	.00	.00	.34	-.26	-.12	.34	-.21
FT	645840	3718	.91	.03	.05	.01	.91	.00	.00	.39	-.15	-.30	-.21	.39
FT	645841	3718	.64	.64	.12	.11	.12	.00	.00	.42	.42	-.21	-.24	-.18
FT	645842	3718	.72	.72	.18	.04	.06	.00	.00	.35	.35	-.11	-.28	-.26
FT	645843	3718	.61	.10	.61	.13	.15	.00	.00	.33	-.16	.33	-.13	-.19
FT	645844	3718	.48	.08	.48	.37	.07	.00	.00	.16	-.22	.16	.02	-.13
FT	645847	3718	.42	.07	.41	.10	.42	.00	.00	.31	-.19	-.07	-.24	.31
FT	645848	3718	.87	.02	.06	.87	.05	.00	.00	.27	-.13	-.18	.27	-.14

Grade 6

Grade 6 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	563699	21438	.84	.84	.10	.04	.02	.00	.00	.45	.45	-.29	-.25	-.19
OP	563790	21438	.69	.69	.18	.04	.09	.00	.00	.52	.52	-.40	-.19	-.16
OP	563791	21438	.85	.85	.06	.05	.04	.00	.00	.48	.48	-.24	-.31	-.22
OP	563801	21438	.81	.07	.03	.08	.81	.00	.00	.43	-.28	-.22	-.19	.43

Grade 6 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	563802	21438	.77	.03	.02	.18	.77	.00	.00	.34	-.14	-.17	-.23	.34
OP	563852	21438	.63	.63	.24	.03	.09	.00	.00	.33	.33	-.09	-.21	-.27
OP	563855	21438	.79	.02	.03	.15	.79	.00	.00	.33	-.18	-.16	-.21	.33
OP	563857	21438	.72	.10	.72	.14	.04	.00	.00	.42	-.26	.42	-.17	-.23
OP	563866	21438	.45	.12	.23	.20	.45	.00	.00	.42	-.07	-.24	-.19	.42
OP	565377	21438	.68	.19	.68	.08	.06	.00	.00	.38	-.11	.38	-.26	-.26
OP	565521	21438	.86	.07	.05	.86	.02	.00	.00	.41	-.22	-.25	.41	-.21
OP	565525	21438	.77	.09	.77	.09	.06	.00	.00	.35	-.17	.35	-.20	-.17
OP	565533	21438	.94	.94	.02	.03	.01	.00	.00	.38	.38	-.20	-.26	-.15
OP	565798	21438	.86	.03	.86	.07	.04	.00	.00	.43	-.23	.43	-.24	-.24
OP	565832	21438	.82	.12	.02	.03	.82	.00	.00	.38	-.26	-.16	-.19	.38
OP	602543	21438	.80	.11	.06	.80	.03	.00	.00	.53	-.25	-.35	.53	-.26
OP	602545	21438	.32	.36	.19	.12	.32	.00	.00	.37	-.11	-.09	-.24	.37
OP	602546	21438	.62	.03	.62	.17	.18	.00	.00	.43	-.17	.43	-.17	-.29
OP	602548	21438	.78	.03	.78	.01	.17	.00	.00	.35	-.24	.35	-.19	-.21
OP	602549	21438	.73	.02	.22	.73	.03	.00	.00	.40	-.23	-.25	.40	-.24
OP	602550	21438	.78	.07	.78	.12	.03	.00	.00	.46	-.28	.46	-.24	-.20
OP	602552	21438	.78	.13	.06	.78	.04	.00	.00	.44	-.31	-.19	.44	-.16
OP	602553	21438	.72	.05	.72	.05	.19	.00	.00	.36	-.24	.36	-.17	-.18
OP	602562	21438	.59	.59	.08	.19	.14	.00	.00	.37	.37	-.23	-.20	-.10
OP	602563	21438	.63	.15	.05	.17	.63	.00	.00	.34	-.17	-.21	-.14	.34
OP	602564	21438	.67	.67	.03	.20	.10	.00	.00	.40	.40	-.20	-.17	-.26
OP	602568	21438	.63	.63	.17	.04	.16	.00	.00	.38	.38	-.16	-.23	-.19
OP	602569	21438	.64	.08	.19	.64	.09	.00	.00	.45	-.22	-.23	.45	-.20
OP	602570	21438	.82	.02	.04	.82	.11	.00	.00	.49	-.19	-.25	.49	-.33
OP	602571	21438	.81	.07	.03	.81	.09	.00	.00	.46	-.21	-.24	.46	-.28
OP	602573	21438	.47	.15	.20	.47	.18	.00	.00	.39	-.17	-.13	.39	-.19
OP	632742	21438	.77	.10	.04	.09	.77	.00	.00	.28	-.24	-.09	-.08	.28
OP	632747	21438	.51	.51	.42	.04	.02	.00	.00	.51	.51	-.37	-.19	-.18
OP	632750	21438	.71	.71	.09	.08	.11	.00	.00	.39	.39	-.18	-.14	-.25
OP	632752	21438	.49	.22	.23	.49	.06	.00	.00	.31	-.05	-.22	.31	-.14
OP	632754	21438	.79	.07	.79	.10	.03	.00	.00	.56	-.28	.56	-.36	-.22
OP	632772	21438	.40	.21	.40	.24	.15	.00	.00	.36	-.20	.36	-.02	-.21
OP	632774	21438	.73	.11	.11	.73	.06	.00	.00	.45	-.19	-.27	.45	-.20
OP	632775	21438	.70	.17	.70	.04	.09	.00	.00	.44	-.29	.44	-.19	-.17
OP	632777	21438	.84	.06	.07	.84	.04	.00	.00	.47	-.26	-.25	.47	-.22
OP	632778	21438	.55	.38	.05	.02	.55	.00	.00	.42	-.26	-.24	-.16	.42
OP	632781	21438	.81	.81	.12	.04	.02	.00	.00	.30	.30	-.21	-.11	-.12
OP	632785	21438	.51	.22	.51	.13	.14	.00	.00	.43	-.24	.43	-.21	-.10
OP	632787	21438	.57	.13	.22	.57	.07	.00	.00	.37	-.15	-.17	.37	-.20

Grade 6 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	632788	21438	.36	.23	.26	.36	.15	.00	.00	.32	-.14	-.10	.32	-.13
OP	632789	21438	.77	.77	.03	.10	.10	.00	.00	.53	.53	-.20	-.31	-.30
OP	632792	21438	.73	.15	.73	.06	.06	.00	.00	.49	-.30	.49	-.23	-.21
OP	632796	21438	.46	.46	.23	.17	.14	.00	.00	.40	.40	-.09	-.13	-.30
FT	645851	3613	.43	.06	.16	.43	.35	.00	.00	.36	-.11	-.26	.36	-.12
FT	645852	3613	.44	.46	.03	.06	.44	.00	.00	.30	-.15	-.14	-.21	.30
FT	645853	3613	.61	.04	.02	.32	.61	.00	.00	.35	-.19	-.22	-.20	.35
FT	645854	3613	.59	.19	.18	.59	.05	.00	.00	.24	.01	-.16	.24	-.28
FT	645855	3613	.82	.10	.82	.07	.01	.00	.00	.30	-.09	.30	-.28	-.17
FT	645856	3613	.37	.37	.22	.35	.06	.00	.00	.30	.30	-.07	-.12	-.24
FT	645858	3613	.91	.91	.02	.03	.03	.00	.00	.37	.37	-.19	-.19	-.24
FT	645859	3613	.88	.88	.04	.04	.04	.00	.00	.30	.30	-.14	-.18	-.16
FT	645860	3613	.84	.05	.84	.06	.05	.00	.00	.44	-.20	.44	-.27	-.23
FT	645862	3613	.85	.07	.04	.85	.03	.00	.00	.42	-.23	-.26	.42	-.21
FT	645864	3517	.39	.39	.19	.08	.35	.00	.00	.26	.26	-.18	-.22	.01
FT	645865	3517	.48	.48	.32	.15	.04	.00	.00	.31	.31	-.10	-.20	-.17
FT	645866	3517	.85	.06	.03	.05	.85	.00	.00	.37	-.20	-.14	-.25	.37
FT	645868	3517	.64	.14	.06	.17	.64	.00	.00	.46	-.13	-.21	-.34	.46
FT	645870	3517	.86	.86	.07	.05	.02	.00	.00	.34	.34	-.23	-.18	-.14
FT	645871	3517	.51	.13	.29	.51	.07	.00	.00	.23	-.21	-.02	.23	-.16
FT	645872	3517	.85	.02	.85	.05	.07	.00	.00	.35	-.12	.35	-.24	-.20
FT	645873	3517	.70	.11	.06	.14	.70	.00	.00	.36	-.22	-.19	-.15	.36
FT	645878	3517	.48	.06	.48	.30	.16	.00	.00	.45	-.23	.45	-.24	-.16
FT	645880	3517	.56	.10	.10	.56	.24	.00	.00	.30	-.14	-.01	.30	-.24
FT	645881	6941	.73	.06	.13	.73	.07	.00	.00	.41	-.24	-.16	.41	-.21
FT	645885	6941	.78	.08	.11	.02	.78	.00	.00	.33	-.25	-.10	-.17	.33
FT	645886	6941	.81	.81	.04	.12	.03	.00	.00	.44	.44	-.26	-.24	-.19
FT	645887	6941	.88	.04	.03	.05	.88	.00	.00	.49	-.26	-.26	-.24	.49
FT	645888	6941	.55	.12	.24	.55	.09	.00	.00	.33	-.15	-.17	.33	-.13
FT	645889	6941	.55	.16	.55	.16	.12	.00	.00	.47	-.25	.47	-.21	-.16
FT	645890	6941	.31	.19	.09	.40	.31	.00	.00	.31	-.16	-.21	-.02	.31
FT	645891	6941	.67	.67	.28	.02	.02	.00	.00	.40	.40	-.26	-.17	-.22
FT	645894	6941	.73	.03	.73	.14	.09	.00	.00	.46	-.23	.46	-.25	-.22
FT	645895	6941	.75	.12	.08	.75	.04	.00	.00	.45	-.23	-.20	.45	-.26
FT	645898	3695	.14	.14	.18	.43	.24	.00	.00	-.15	-.15	-.10	.02	.20
FT	645899	3695	.86	.04	.04	.86	.05	.00	.00	.45	-.19	-.24	.45	-.31
FT	645900	3695	.26	.52	.10	.12	.26	.00	.00	.29	.02	-.20	-.23	.29
FT	645901	3695	.83	.09	.83	.02	.05	.00	.00	.27	-.10	.27	-.20	-.18
FT	645902	3695	.89	.05	.89	.01	.04	.00	.00	.39	-.22	.39	-.16	-.27
FT	645904	3695	.61	.61	.17	.09	.13	.00	.00	.46	.46	-.21	-.25	-.22

Grade 6 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	645905	3695	.56	.15	.20	.09	.56	.00	.00	.33	-.20	-.05	-.26	.33
FT	645906	3695	.40	.14	.40	.23	.24	.00	.00	.31	-.14	.31	-.12	-.13
FT	645908	3695	.66	.26	.06	.66	.02	.00	.00	.33	-.15	-.28	.33	-.19
FT	645910	3695	.89	.01	.06	.89	.04	.00	.00	.37	-.17	-.21	.37	-.24
FT	646001	3669	.76	.76	.14	.04	.07	.00	.00	.28	.28	-.17	-.12	-.16
FT	646002	3669	.85	.05	.85	.04	.06	.00	.00	.31	-.18	.31	-.24	-.11
FT	646003	3669	.52	.06	.26	.52	.15	.00	.00	.39	-.15	-.29	.39	-.09
FT	646004	3669	.67	.14	.08	.67	.11	.00	.00	.42	-.17	-.19	.42	-.28
FT	646006	3669	.63	.10	.15	.11	.63	.00	.00	.24	-.08	-.14	-.13	.24
FT	646007	3669	.58	.10	.06	.58	.25	.00	.00	.36	-.18	-.17	.36	-.19
FT	646008	3669	.53	.08	.26	.13	.53	.00	.00	.25	-.23	-.08	-.08	.25
FT	646010	3669	.78	.78	.05	.06	.11	.00	.00	.39	.39	-.21	-.19	-.23
FT	646012	3669	.68	.03	.68	.07	.21	.00	.00	.07	-.14	.07	-.20	.11
FT	646013	3669	.89	.03	.89	.04	.04	.00	.00	.36	-.17	.36	-.25	-.17

Grade 7

Grade 7 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	564046	21053	.54	.05	.54	.29	.12	.00	.00	.27	-.24	.27	-.17	-.01
OP	564050	21053	.82	.06	.10	.82	.01	.00	.00	.29	-.13	-.17	.29	-.18
OP	564051	21053	.87	.87	.05	.04	.04	.00	.00	.36	.36	-.24	-.12	-.20
OP	564052	21053	.94	.02	.02	.94	.02	.00	.00	.30	-.13	-.22	.30	-.12
OP	564056	21053	.59	.05	.27	.09	.59	.00	.00	.37	-.17	-.16	-.23	.37
OP	602587	21053	.72	.06	.10	.12	.72	.00	.00	.51	-.26	-.28	-.23	.51
OP	602589	21053	.72	.06	.14	.08	.72	.00	.00	.36	-.21	-.14	-.22	.36
OP	602591	21053	.47	.17	.47	.19	.16	.00	.00	.30	-.18	.30	-.13	-.07
OP	602592	21053	.54	.21	.18	.06	.54	.00	.00	.31	-.27	-.01	-.15	.31
OP	602593	21053	.67	.12	.67	.16	.05	.00	.00	.37	-.31	.37	-.05	-.24
OP	602597	21053	.75	.02	.14	.75	.09	.00	.00	.47	-.15	-.33	.47	-.22
OP	602624	21053	.77	.14	.05	.77	.04	.00	.00	.48	-.29	-.25	.48	-.17
OP	602625	21053	.70	.14	.70	.07	.09	.00	.00	.33	-.11	.33	-.16	-.22
OP	602626	21053	.49	.17	.26	.08	.49	.00	.00	.48	-.04	-.45	-.08	.48
OP	602630	21053	.61	.14	.20	.61	.05	.00	.00	.40	-.20	-.17	.40	-.23
OP	602631	21053	.87	.04	.03	.05	.87	.00	.00	.52	-.25	-.26	-.29	.52
OP	602633	21053	.48	.48	.08	.18	.25	.00	.00	.47	.47	-.23	-.29	-.12
OP	602634	21053	.65	.12	.65	.14	.07	.00	.00	.38	-.14	.38	-.26	-.12
OP	602635	21053	.80	.80	.05	.02	.13	.00	.00	.48	.48	-.22	-.19	-.31
OP	602636	21053	.78	.11	.01	.09	.78	.00	.00	.37	-.27	-.19	-.12	.37

Grade 7 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	633139	21053	.58	.17	.58	.03	.22	.00	.00	.42	-.16	.42	-.21	-.23
OP	633142	21053	.91	.01	.03	.91	.04	.00	.00	.40	-.17	-.24	.40	-.21
OP	633144	21053	.52	.52	.21	.19	.07	.00	.00	.39	.39	-.26	-.05	-.23
OP	633145	21053	.82	.02	.06	.09	.82	.00	.00	.41	-.20	-.14	-.30	.41
OP	633151	21053	.86	.05	.04	.86	.05	.00	.00	.46	-.22	-.23	.46	-.28
OP	633152	21053	.68	.14	.68	.04	.14	.00	.00	.43	-.26	.43	-.20	-.17
OP	633154	21053	.72	.06	.11	.72	.10	.00	.00	.48	-.25	-.19	.48	-.27
OP	633155	21053	.57	.57	.12	.22	.09	.00	.00	.41	.41	-.21	-.16	-.20
OP	633157	21053	.63	.16	.09	.11	.63	.00	.00	.46	-.26	-.22	-.16	.46
OP	633159	21053	.85	.09	.02	.03	.85	.00	.00	.49	-.27	-.23	-.28	.49
OP	633161	21053	.71	.04	.20	.71	.05	.00	.00	.54	-.23	-.35	.54	-.23
OP	633165	21053	.69	.08	.69	.15	.07	.00	.00	.53	-.26	.53	-.30	-.21
OP	633173	21053	.35	.35	.27	.18	.19	.00	.00	.40	.40	-.12	-.24	-.08
OP	633176	21053	.59	.13	.59	.04	.23	.00	.00	.39	-.30	.39	-.24	-.07
OP	633177	21053	.51	.18	.20	.51	.10	.00	.00	.49	-.27	-.14	.49	-.24
OP	633178	21053	.35	.35	.10	.31	.24	.00	.00	.26	.26	-.22	-.01	-.10
OP	633182	21053	.70	.70	.10	.12	.08	.00	.00	.56	.56	-.29	-.29	-.24
OP	633183	21053	.61	.13	.61	.14	.13	.00	.00	.42	-.15	.42	-.21	-.21
OP	633190	21053	.88	.03	.04	.88	.06	.00	.00	.49	-.25	-.25	.49	-.29
OP	633194	21053	.73	.73	.02	.17	.08	.00	.00	.48	.48	-.20	-.32	-.21
OP	633197	21053	.82	.82	.03	.06	.09	.00	.00	.43	.43	-.23	-.25	-.21
OP	633198	21053	.67	.21	.67	.08	.04	.00	.00	.40	-.14	.40	-.28	-.26
OP	633199	21053	.51	.32	.11	.51	.06	.00	.00	.41	-.09	-.31	.41	-.24
OP	633204	21053	.55	.06	.55	.11	.28	.00	.00	.46	-.16	.46	-.29	-.19
OP	633208	21053	.64	.03	.04	.64	.28	.00	.00	.41	-.21	-.29	.41	-.19
OP	633209	21053	.61	.08	.61	.23	.07	.00	.00	.34	-.23	.34	-.07	-.23
OP	633214	21053	.74	.06	.02	.74	.18	.00	.00	.42	-.18	-.21	.42	-.27
OP	633215	21053	.80	.05	.06	.80	.09	.00	.00	.48	-.26	-.24	.48	-.23
FT	645918	3627	.38	.38	.06	.11	.45	.00	.00	.09	.09	-.16	-.12	.06
FT	645919	3627	.49	.10	.16	.25	.49	.00	.00	.32	-.18	-.10	-.17	.32
FT	645921	3627	.86	.01	.08	.05	.86	.00	.00	.30	-.15	-.24	-.10	.30
FT	645922	3627	.72	.72	.08	.13	.07	.00	.00	.33	.33	-.28	-.03	-.24
FT	645923	3627	.72	.72	.05	.20	.03	.00	.00	.33	.33	-.25	-.15	-.19
FT	645924	3627	.79	.06	.09	.79	.06	.00	.00	.39	-.18	-.21	.39	-.24
FT	645925	3627	.83	.10	.83	.04	.03	.00	.00	.33	-.12	.33	-.27	-.19
FT	645926	3627	.72	.72	.12	.10	.07	.00	.00	.47	.47	-.30	-.24	-.17
FT	645927	3627	.91	.03	.91	.02	.04	.00	.00	.35	-.22	.35	-.15	-.22
FT	645928	3627	.78	.09	.07	.78	.06	.00	.00	.42	-.17	-.25	.42	-.24
FT	645929	3569	.69	.69	.18	.12	.02	.00	.00	.32	.32	-.16	-.19	-.20
FT	645931	3569	.89	.89	.03	.06	.02	.00	.00	.44	.44	-.24	-.28	-.22

Grade 7 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	645932	3569	.75	.20	.75	.02	.03	.00	.00	.23	-.12	.23	-.17	-.16
FT	645933	3569	.69	.10	.09	.69	.12	.00	.00	.38	-.20	-.30	.38	-.09
FT	645934	3569	.62	.62	.17	.09	.12	.00	.00	.31	.31	-.20	-.12	-.13
FT	645936	3569	.39	.11	.41	.08	.39	.00	.00	.29	-.20	-.02	-.24	.29
FT	645937	3569	.61	.09	.18	.12	.61	.00	.00	.42	-.12	-.20	-.29	.42
FT	645938	3569	.61	.22	.05	.61	.11	.00	.00	.37	-.14	-.27	.37	-.20
FT	645940	3569	.49	.12	.26	.49	.14	.00	.00	.29	-.13	-.10	.29	-.18
FT	645941	3569	.72	.07	.72	.13	.08	.00	.00	.35	-.19	.35	-.19	-.16
FT	645957	3728	.90	.90	.03	.03	.03	.00	.00	.47	.47	-.30	-.25	-.23
FT	645958	3728	.86	.07	.86	.03	.03	.00	.00	.32	-.21	.32	-.19	-.13
FT	645959	3728	.85	.01	.01	.12	.85	.00	.00	.37	-.22	-.21	-.24	.37
FT	645961	3728	.77	.77	.04	.02	.17	.00	.00	.39	.39	-.22	-.22	-.24
FT	645962	3728	.59	.59	.26	.10	.04	.00	.00	.35	.35	-.13	-.24	-.20
FT	645964	3728	.41	.30	.41	.23	.06	.00	.00	.35	-.17	.35	-.11	-.19
FT	645965	3728	.84	.02	.13	.84	.01	.00	.00	.36	-.16	-.28	.36	-.14
FT	645967	3728	.88	.03	.05	.04	.88	.00	.00	.48	-.27	-.29	-.23	.48
FT	645969	3728	.76	.18	.03	.76	.03	.00	.00	.41	-.29	-.21	.41	-.17
FT	645970	3728	.78	.10	.78	.04	.08	.00	.00	.41	-.22	.41	-.22	-.23
FT	646028	6495	.82	.06	.06	.82	.06	.01	.00	.48	-.24	-.24	.48	-.23
FT	646029	6495	.67	.11	.67	.07	.14	.01	.00	.37	-.15	.37	-.23	-.15
FT	646030	6495	.79	.06	.12	.03	.79	.01	.00	.48	-.14	-.30	-.27	.48
FT	646031	6495	.32	.37	.32	.15	.16	.01	.00	.08	.20	.08	-.17	-.15
FT	646032	6495	.75	.04	.12	.09	.75	.01	.00	.43	-.19	-.16	-.27	.43
FT	646033	6495	.85	.85	.03	.05	.07	.01	.00	.44	.44	-.22	-.26	-.19
FT	646034	6495	.58	.58	.09	.12	.20	.01	.00	.47	.47	-.20	-.18	-.23
FT	646035	6495	.64	.10	.20	.64	.05	.01	.00	.46	-.17	-.25	.46	-.22
FT	646036	6495	.68	.68	.07	.06	.18	.01	.00	.50	.50	-.16	-.26	-.28
FT	646037	6495	.69	.17	.69	.05	.08	.01	.00	.33	-.06	.33	-.27	-.18
FT	646038	3629	.57	.16	.03	.24	.57	.00	.00	.44	-.19	-.22	-.26	.44
FT	646040	3629	.88	.04	.88	.06	.02	.00	.00	.42	-.24	.42	-.26	-.19
FT	646041	3629	.58	.18	.09	.58	.15	.00	.00	.42	-.22	-.25	.42	-.14
FT	646042	3629	.39	.40	.39	.11	.10	.00	.00	.08	-.02	.08	-.04	-.04
FT	646043	3629	.76	.76	.15	.05	.05	.00	.00	.46	.46	-.25	-.27	-.24
FT	646044	3629	.46	.07	.46	.33	.13	.00	.00	.23	-.24	.23	.06	-.24
FT	646045	3629	.67	.14	.07	.67	.12	.00	.00	.42	-.20	-.29	.42	-.16
FT	646047	3629	.63	.03	.22	.12	.63	.00	.00	.39	-.12	-.17	-.30	.39
FT	646050	3629	.69	.69	.01	.28	.02	.00	.00	.27	.27	-.20	-.18	-.15
FT	646051	3629	.61	.13	.19	.07	.61	.00	.00	.30	-.17	-.04	-.28	.30

Grade 8

Grade 8 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	564222	20820	.54	.06	.54	.30	.09	.00	.00	.31	-.28	.31	-.07	-.18
OP	564224	20820	.91	.91	.03	.04	.01	.00	.00	.45	.45	-.23	-.31	-.18
OP	564226	20820	.83	.83	.12	.02	.02	.00	.00	.27	.27	-.12	-.21	-.17
OP	565758	20820	.60	.19	.60	.03	.17	.00	.00	.41	-.12	.41	-.21	-.29
OP	565810	20820	.89	.02	.06	.89	.04	.00	.00	.36	-.24	-.20	.36	-.17
OP	602752	20820	.62	.09	.11	.18	.62	.00	.00	.45	-.18	-.32	-.16	.45
OP	602754	20820	.81	.01	.81	.03	.14	.00	.00	.39	-.18	.39	-.16	-.28
OP	602755	20820	.66	.23	.09	.02	.66	.00	.00	.41	-.21	-.23	-.22	.41
OP	602759	20820	.63	.11	.19	.63	.07	.00	.00	.47	-.23	-.24	.47	-.23
OP	602763	20820	.71	.71	.06	.10	.12	.00	.00	.48	.48	-.24	-.27	-.22
OP	602765	20820	.50	.06	.39	.50	.05	.00	.00	.42	-.24	-.24	.42	-.13
OP	602766	20820	.66	.18	.66	.11	.05	.00	.00	.44	-.23	.44	-.19	-.25
OP	602767	20820	.56	.12	.12	.19	.56	.00	.00	.29	-.04	-.12	-.20	.29
OP	602769	20820	.77	.03	.08	.77	.12	.00	.00	.39	-.19	-.28	.39	-.14
OP	602771	20820	.74	.74	.13	.10	.04	.00	.00	.50	.50	-.30	-.25	-.20
OP	602776	20820	.53	.11	.53	.31	.05	.00	.00	.44	-.24	.44	-.18	-.25
OP	602779	20820	.78	.78	.04	.08	.09	.00	.00	.52	.52	-.27	-.29	-.24
OP	602780	20820	.58	.10	.58	.10	.21	.00	.00	.36	-.20	.36	-.20	-.11
OP	602783	20820	.67	.19	.08	.67	.06	.00	.00	.38	-.10	-.27	.38	-.24
OP	602785	20820	.63	.16	.10	.63	.10	.00	.00	.42	-.17	-.24	.42	-.20
OP	602786	20820	.59	.59	.09	.23	.08	.00	.00	.51	.51	-.28	-.23	-.23
OP	602788	20820	.57	.13	.19	.11	.57	.00	.00	.42	-.16	-.19	-.23	.42
OP	602789	20820	.62	.17	.12	.09	.62	.00	.00	.40	-.11	-.23	-.23	.40
OP	602790	20820	.54	.54	.19	.18	.09	.00	.00	.43	.43	-.23	-.20	-.13
OP	633319	20820	.90	.90	.02	.01	.06	.00	.00	.38	.38	-.22	-.19	-.22
OP	633320	20820	.87	.01	.87	.04	.07	.00	.00	.35	-.18	.35	-.22	-.17
OP	633322	20820	.80	.04	.05	.11	.80	.00	.00	.45	-.27	-.27	-.20	.45
OP	633323	20820	.37	.10	.20	.32	.37	.00	.00	.31	-.18	-.25	.03	.31
OP	633325	20820	.90	.06	.02	.90	.02	.00	.00	.33	-.18	-.20	.33	-.16
OP	633327	20820	.47	.06	.26	.47	.21	.00	.00	.30	-.19	-.04	.30	-.20
OP	633343	20820	.62	.07	.24	.07	.62	.00	.00	.42	-.18	-.22	-.22	.42
OP	633346	20820	.48	.48	.16	.28	.07	.00	.00	.35	.35	-.23	-.12	-.10
OP	633347	20820	.72	.15	.08	.72	.05	.00	.00	.41	-.18	-.28	.41	-.14
OP	633348	20820	.72	.08	.07	.72	.14	.00	.00	.35	-.17	-.25	.35	-.11
OP	633349	20820	.43	.39	.43	.11	.07	.00	.00	.29	-.10	.29	-.11	-.21
OP	633351	20820	.67	.16	.14	.03	.67	.00	.00	.45	-.15	-.31	-.23	.45
OP	633355	20820	.64	.64	.08	.18	.09	.00	.00	.31	.31	-.25	-.09	-.12
OP	633356	20820	.50	.50	.03	.26	.20	.00	.00	.39	.39	-.21	-.19	-.17

Grade 8 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	633357	20820	.84	.05	.84	.09	.02	.00	.00	.47	-.23	.47	-.32	-.18
OP	633361	20820	.68	.68	.11	.06	.15	.00	.00	.50	.50	-.24	-.23	-.26
OP	633364	20820	.82	.82	.08	.08	.03	.00	.00	.41	.41	-.28	-.21	-.12
OP	633365	20820	.59	.06	.18	.16	.59	.00	.00	.43	-.21	-.28	-.12	.43
OP	633370	20820	.67	.17	.67	.08	.07	.00	.00	.42	-.25	.42	-.18	-.16
OP	633371	20820	.83	.06	.83	.06	.05	.00	.00	.47	-.25	.47	-.28	-.19
OP	633372	20820	.86	.02	.86	.05	.07	.00	.00	.37	-.23	.37	-.21	-.16
OP	633374	20820	.62	.15	.18	.62	.05	.00	.00	.39	-.13	-.22	.39	-.24
OP	633376	20820	.71	.71	.04	.14	.10	.00	.00	.44	.44	-.26	-.23	-.20
OP	633378	20820	.63	.16	.04	.17	.63	.00	.00	.45	-.24	-.28	-.17	.45
OP	633380	20820	.59	.02	.20	.18	.59	.00	.00	.34	-.23	-.04	-.29	.34
OP	633383	20820	.74	.74	.07	.10	.09	.00	.00	.38	.38	-.29	-.14	-.15
FT	645972	3521	.53	.02	.53	.19	.26	.00	.00	.40	-.18	.40	-.16	-.26
FT	645973	3521	.89	.89	.07	.02	.01	.00	.00	.35	.35	-.26	-.18	-.13
FT	645975	3521	.69	.06	.16	.10	.69	.00	.00	.42	-.22	-.23	-.19	.42
FT	645976	3521	.83	.05	.05	.83	.07	.00	.00	.44	-.22	-.26	.44	-.22
FT	645977	3521	.88	.04	.88	.03	.04	.00	.00	.42	-.26	.42	-.26	-.18
FT	645980	3521	.62	.08	.62	.13	.17	.00	.00	.38	-.23	.38	-.25	-.10
FT	645981	3521	.37	.37	.12	.09	.43	.00	.00	.08	.08	-.20	-.25	.21
FT	645982	3521	.72	.72	.19	.05	.04	.00	.00	.40	.40	-.22	-.25	-.19
FT	645984	3521	.68	.14	.06	.12	.68	.00	.00	.37	-.10	-.19	-.28	.37
FT	645985	3521	.48	.05	.37	.48	.10	.00	.00	.27	-.22	-.10	.27	-.12
FT	646053	3525	.64	.64	.21	.08	.07	.00	.00	.35	.35	-.19	-.17	-.17
FT	646055	3525	.53	.25	.07	.53	.16	.00	.00	.24	-.09	-.17	.24	-.10
FT	646056	3525	.22	.62	.22	.09	.07	.00	.00	-.18	.30	-.18	-.12	-.14
FT	646057	3525	.43	.41	.07	.43	.08	.00	.00	.31	-.13	-.17	.31	-.16
FT	646058	3525	.21	.06	.21	.51	.22	.00	.00	-.01	-.18	-.01	.28	-.22
FT	646059	3525	.81	.81	.08	.04	.07	.00	.00	.48	.48	-.22	-.30	-.27
FT	646062	3525	.61	.07	.17	.15	.61	.00	.00	.28	-.12	-.07	-.22	.28
FT	646063	3525	.33	.29	.19	.20	.33	.00	.00	.30	-.16	-.07	-.09	.30
FT	646064	3525	.69	.15	.08	.08	.69	.00	.00	.43	-.11	-.32	-.27	.43
FT	646065	3525	.61	.17	.17	.61	.05	.00	.00	.42	-.10	-.32	.42	-.21
FT	646066	3663	.87	.05	.05	.87	.03	.00	.00	.42	-.22	-.25	.42	-.22
FT	646067	3663	.87	.87	.04	.04	.04	.00	.00	.29	.29	-.19	-.16	-.12
FT	646069	3663	.89	.89	.04	.03	.04	.00	.00	.38	.38	-.28	-.20	-.15
FT	646071	3663	.79	.09	.03	.79	.09	.00	.00	.44	-.27	-.24	.44	-.22
FT	646072	3663	.40	.20	.40	.32	.07	.00	.00	.23	-.10	.23	-.10	-.10
FT	646073	3663	.68	.68	.12	.14	.06	.00	.00	.29	.29	-.19	-.11	-.14
FT	646074	3663	.72	.09	.07	.12	.72	.00	.00	.28	-.11	-.13	-.19	.28
FT	646075	3663	.30	.15	.16	.39	.30	.00	.00	.26	-.25	-.19	.09	.26

Grade 8 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646076	3663	.75	.14	.04	.08	.75	.00	.00	.38	-.17	-.24	-.22	.38
FT	646077	3663	.35	.27	.35	.26	.13	.00	.00	.25	-.05	.25	-.21	-.01
FT	646079	3551	.70	.70	.05	.19	.06	.00	.00	.15	.15	-.18	.01	-.13
FT	646080	3551	.93	.01	.93	.01	.04	.00	.00	.39	-.21	.39	-.23	-.25
FT	646082	3551	.62	.62	.10	.13	.14	.00	.00	.20	.20	-.14	-.16	.01
FT	646084	3551	.83	.04	.03	.83	.09	.00	.00	.35	-.25	-.24	.35	-.13
FT	646085	3551	.94	.02	.02	.02	.94	.00	.00	.29	-.15	-.21	-.13	.29
FT	646086	3551	.95	.95	.02	.02	.01	.00	.00	.34	.34	-.24	-.18	-.16
FT	646087	3551	.73	.20	.73	.05	.03	.00	.00	.44	-.31	.44	-.20	-.17
FT	646089	3551	.36	.27	.10	.28	.36	.00	.00	.29	-.12	-.18	-.07	.29
FT	646090	3551	.75	.07	.15	.75	.03	.00	.00	.47	-.18	-.34	.47	-.21
FT	646092	3551	.68	.15	.09	.08	.68	.00	.00	.48	-.24	-.23	-.26	.48
FT	646094	6556	.69	.19	.03	.69	.08	.00	.00	.40	-.17	-.21	.40	-.23
FT	646095	6556	.63	.09	.17	.11	.63	.01	.00	.52	-.22	-.29	-.21	.52
FT	646096	6556	.42	.09	.42	.08	.41	.01	.00	.07	-.22	.07	-.27	.24
FT	646097	6556	.63	.63	.08	.08	.21	.01	.00	.44	.44	-.22	-.19	-.21
FT	646099	6556	.71	.03	.16	.71	.09	.01	.00	.40	-.22	-.23	.40	-.15
FT	646100	6556	.72	.07	.72	.07	.14	.01	.00	.46	-.24	.46	-.24	-.21
FT	646101	6556	.43	.43	.35	.09	.13	.01	.00	.35	.35	-.12	-.19	-.14
FT	646102	6556	.24	.24	.16	.48	.11	.01	.00	.05	.05	-.22	.24	-.13
FT	646103	6556	.73	.19	.04	.04	.73	.01	.00	.52	-.32	-.23	-.22	.52
FT	646104	6556	.50	.06	.25	.50	.19	.01	.00	.31	-.27	.02	.31	-.21

Grade 11

Grade 11 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	564324	20961	.70	.70	.05	.17	.07	.01	.00	.38	.38	-.20	-.14	-.23
OP	564329	20961	.83	.07	.83	.03	.05	.01	.00	.51	-.25	.51	-.26	-.26
OP	564331	20961	.67	.03	.21	.67	.09	.01	.00	.56	-.20	-.35	.56	-.25
OP	564333	20961	.58	.07	.58	.12	.23	.01	.00	.42	-.18	.42	-.32	-.10
OP	564341	20961	.82	.82	.08	.06	.04	.01	.00	.52	.52	-.31	-.26	-.20
OP	564401	20961	.83	.83	.09	.06	.02	.00	.00	.37	.37	-.16	-.27	-.14
OP	564402	20961	.56	.56	.24	.07	.13	.00	.00	.41	.41	-.20	-.22	-.16
OP	564403	20961	.72	.05	.12	.10	.72	.00	.00	.56	-.23	-.33	-.28	.56

Grade 11 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	564415	20961	.83	.10	.03	.04	.83	.00	.00	.48	-.26	-.25	-.28	.48
OP	565553	20961	.87	.02	.06	.87	.05	.00	.00	.45	-.20	-.30	.45	-.21
OP	565572	20961	.40	.36	.09	.40	.14	.00	.00	.33	-.11	-.18	.33	-.14
OP	602805	20961	.62	.28	.05	.62	.04	.01	.00	.33	-.15	-.20	.33	-.16
OP	602808	20961	.57	.28	.09	.57	.06	.01	.00	.35	-.06	-.28	.35	-.23
OP	602809	20961	.50	.50	.16	.19	.15	.01	.00	.43	.43	-.29	-.21	-.04
OP	602810	20961	.61	.61	.17	.12	.10	.01	.00	.59	.59	-.30	-.29	-.21
OP	602811	20961	.51	.28	.51	.05	.15	.01	.00	.44	-.21	.44	-.30	-.12
OP	602814	20961	.49	.29	.49	.09	.12	.01	.00	.40	-.27	.40	-.16	-.05
OP	602818	20961	.45	.23	.24	.09	.45	.01	.00	.38	-.05	-.25	-.18	.38
OP	602819	20961	.55	.07	.55	.20	.17	.00	.00	.27	-.04	.27	-.25	-.05
OP	602820	20961	.61	.18	.61	.06	.13	.00	.00	.47	-.33	.47	-.16	-.14
OP	602824	20961	.52	.07	.52	.31	.09	.00	.00	.46	-.28	.46	-.17	-.24
OP	602825	20961	.35	.11	.37	.17	.35	.00	.00	.34	-.20	-.01	-.24	.34
OP	602826	20961	.81	.05	.81	.06	.08	.00	.00	.44	-.23	.44	-.27	-.18
OP	602828	20961	.69	.69	.04	.22	.05	.00	.00	.50	.50	-.16	-.33	-.28
OP	602830	20961	.74	.03	.05	.74	.17	.00	.00	.43	-.22	-.27	.43	-.23
OP	602833	20961	.78	.10	.08	.78	.04	.01	.00	.38	-.18	-.17	.38	-.23
OP	602835	20961	.60	.15	.20	.04	.60	.01	.00	.49	-.27	-.18	-.27	.49
OP	602839	20961	.76	.09	.76	.09	.06	.01	.00	.47	-.19	.47	-.26	-.25
OP	602840	20961	.76	.06	.10	.07	.76	.01	.00	.49	-.26	-.27	-.20	.49
OP	602842	20961	.57	.28	.05	.57	.10	.01	.00	.49	-.21	-.28	.49	-.24
OP	602843	20961	.51	.19	.19	.11	.51	.01	.00	.40	-.12	-.12	-.28	.40
OP	602844	20961	.73	.06	.73	.11	.09	.01	.00	.47	-.13	.47	-.30	-.23
OP	602845	20961	.80	.12	.80	.05	.02	.01	.00	.54	-.39	.54	-.20	-.20
OP	632813	20961	.73	.07	.11	.09	.73	.00	.00	.53	-.28	-.26	-.27	.53
OP	632815	20961	.70	.22	.04	.70	.04	.00	.00	.31	-.14	-.21	.31	-.18
OP	632821	20961	.72	.05	.72	.03	.19	.00	.00	.53	-.22	.53	-.27	-.34
OP	632824	20961	.66	.03	.04	.27	.66	.00	.00	.41	-.23	-.29	-.20	.41
OP	632826	20961	.87	.87	.04	.05	.04	.00	.00	.45	.45	-.26	-.21	-.23
OP	632827	20961	.81	.07	.08	.81	.04	.01	.00	.42	-.17	-.25	.42	-.21

Grade 11 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	632828	20961	.88	.03	.02	.07	.88	.01	.00	.50	-.24	-.20	-.33	.50
OP	632830	20961	.75	.75	.06	.17	.02	.01	.00	.41	.41	-.30	-.19	-.16
OP	632833	20961	.77	.06	.10	.06	.77	.01	.00	.50	-.26	-.23	-.25	.50
OP	632835	20961	.56	.56	.05	.08	.30	.01	.00	.36	.36	-.29	-.29	-.04
OP	632837	20961	.75	.13	.04	.07	.75	.01	.00	.54	-.28	-.26	-.29	.54
OP	632838	20961	.59	.21	.59	.11	.08	.01	.00	.47	-.24	.47	-.20	-.20
OP	632840	20961	.53	.10	.53	.21	.15	.00	.00	.44	-.23	.44	-.19	-.18
OP	632842	20961	.22	.05	.41	.31	.22	.00	.00	.26	-.18	-.10	-.01	.26
OP	632844	20961	.58	.26	.09	.58	.06	.00	.00	.56	-.36	-.23	.56	-.17
OP	632845	20961	.50	.35	.50	.06	.09	.00	.00	.40	-.21	.40	-.26	-.11
OP	632850	20961	.58	.58	.16	.18	.07	.00	.00	.44	.44	-.21	-.21	-.18
FT	646157	3805	.75	.09	.11	.04	.75	.00	.00	.50	-.21	-.29	-.29	.50
FT	646158	3805	.75	.13	.03	.75	.09	.00	.00	.45	-.21	-.28	.45	-.25
FT	646160	3805	.48	.17	.16	.18	.48	.00	.00	.32	-.09	-.26	-.07	.32
FT	646162	3805	.68	.10	.68	.08	.14	.00	.00	.36	-.23	.36	-.24	-.09
FT	646163	3805	.56	.20	.17	.56	.07	.00	.00	.38	-.17	-.24	.38	-.13
FT	646164	3805	.77	.77	.10	.06	.08	.00	.00	.48	.48	-.31	-.28	-.17
FT	646165	3805	.39	.27	.39	.29	.04	.00	.00	.30	-.16	.30	-.09	-.15
FT	646167	3805	.56	.23	.56	.13	.07	.00	.00	.40	-.15	.40	-.27	-.17
FT	646169	3805	.59	.59	.19	.06	.16	.00	.00	.22	.22	-.05	-.21	-.11
FT	646170	3805	.74	.09	.13	.74	.05	.00	.00	.40	-.20	-.26	.40	-.15
FT	646172	5695	.65	.65	.19	.11	.04	.01	.00	.54	.54	-.27	-.26	-.22
FT	646173	5695	.74	.05	.15	.05	.74	.01	.00	.52	-.27	-.25	-.25	.52
FT	646174	5695	.77	.77	.08	.09	.05	.01	.00	.54	.54	-.30	-.24	-.23
FT	646175	5695	.70	.08	.11	.70	.10	.01	.00	.47	-.19	-.28	.47	-.17
FT	646176	5695	.62	.08	.15	.62	.14	.01	.00	.49	-.28	-.25	.49	-.13
FT	646179	5695	.65	.11	.06	.17	.65	.01	.00	.51	-.28	-.22	-.21	.51
FT	646180	5695	.68	.14	.68	.14	.03	.01	.00	.40	-.20	.40	-.17	-.19
FT	646181	5695	.65	.26	.65	.05	.04	.01	.00	.32	-.06	.32	-.27	-.19
FT	646182	5695	.67	.08	.13	.67	.11	.01	.00	.44	-.20	-.23	.44	-.16
FT	646183	5695	.68	.06	.68	.08	.17	.01	.00	.54	-.25	.54	-.27	-.24

Grade 11 Reading

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646185	3817	.56	.07	.08	.56	.30	.00	.00	.41	-.29	-.32	.41	-.10
FT	646187	3817	.86	.03	.86	.09	.03	.00	.00	.40	-.24	.40	-.23	-.24
FT	646188	3817	.47	.47	.24	.20	.09	.00	.00	.38	.38	-.18	-.18	-.15
FT	646189	3817	.76	.07	.76	.10	.06	.00	.00	.48	-.18	.48	-.29	-.29
FT	646190	3817	.40	.29	.04	.40	.27	.00	.00	.17	-.04	-.29	.17	-.01
FT	646191	3817	.50	.06	.31	.14	.50	.00	.00	.05	-.23	.14	-.10	.05
FT	646192	3817	.78	.10	.08	.05	.78	.00	.00	.49	-.21	-.29	-.29	.49
FT	646193	3817	.58	.58	.19	.15	.08	.00	.00	.40	.40	-.16	-.21	-.21
FT	646194	3817	.46	.46	.11	.06	.37	.00	.00	.37	.37	-.31	-.25	-.05
FT	646195	3817	.65	.06	.27	.65	.03	.00	.00	.37	-.27	-.18	.37	-.21
FT	646197	3876	.54	.20	.07	.54	.18	.00	.00	.34	-.14	-.14	.34	-.19
FT	646198	3876	.84	.07	.04	.05	.84	.00	.00	.37	-.17	-.24	-.20	.37
FT	646199	3876	.42	.42	.06	.05	.46	.00	.00	.28	.28	-.17	-.23	-.09
FT	646201	3876	.68	.13	.68	.09	.09	.00	.00	.42	-.27	.42	-.26	-.10
FT	646203	3876	.47	.38	.09	.06	.47	.00	.00	.22	-.01	-.19	-.20	.22
FT	646208	3876	.51	.51	.27	.16	.07	.00	.00	.24	.24	-.14	-.14	-.03
FT	646211	3876	.72	.14	.72	.07	.08	.00	.00	.30	-.12	.30	-.13	-.22
FT	646213	3876	.57	.08	.57	.31	.05	.00	.00	.31	-.17	.31	-.18	-.12
FT	646214	3876	.58	.13	.18	.58	.11	.00	.00	.21	-.08	-.12	.21	-.09
FT	646215	3876	.69	.69	.10	.14	.07	.00	.00	.38	.38	-.21	-.21	-.15
FT	646217	3760	.67	.67	.04	.08	.21	.00	.00	.46	.46	-.30	-.27	-.20
FT	646218	3760	.37	.27	.19	.17	.37	.00	.00	.27	-.11	-.09	-.13	.27
FT	646220	3760	.58	.12	.11	.19	.58	.00	.00	.42	-.19	-.22	-.19	.42
FT	646221	3760	.76	.05	.76	.11	.08	.00	.00	.40	-.19	.40	-.24	-.19
FT	646222	3760	.68	.06	.68	.06	.20	.00	.00	.51	-.22	.51	-.29	-.30
FT	646224	3760	.82	.82	.10	.05	.03	.00	.00	.48	.48	-.29	-.26	-.23
FT	646225	3760	.39	.04	.39	.30	.28	.00	.00	.30	-.18	.30	-.01	-.25
FT	646228	3760	.43	.19	.18	.43	.19	.00	.00	.28	-.21	-.09	.28	-.05
FT	646229	3760	.80	.07	.09	.80	.04	.00	.00	.42	-.29	-.18	.42	-.20
FT	646230	3760	.75	.14	.06	.75	.05	.00	.00	.47	-.24	-.29	.47	-.25

Appendix I: Mathematics Key Verification and Foil Analysis
Grade 3

Grade 3 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	599737	22217	.73	.08	.09	.73	.11	.00	.00	.52	-.27	-.25	.52	-.29
OP	599739	22217	.73	.09	.05	.13	.73	.00	.00	.42	-.29	-.21	-.16	.42
OP	599741	22217	.53	.11	.25	.53	.11	.00	.00	.39	-.21	-.11	.39	-.26
OP	599760	22217	.63	.63	.07	.21	.08	.00	.00	.46	.46	-.25	-.22	-.24
OP	599775	22217	.82	.10	.04	.04	.82	.00	.00	.36	-.20	-.19	-.20	.36
OP	599776	22217	.83	.04	.11	.83	.02	.00	.00	.41	-.18	-.31	.41	-.16
OP	599778	22217	.70	.06	.15	.08	.70	.00	.00	.48	-.24	-.26	-.24	.48
OP	599780	22217	.80	.80	.05	.05	.10	.00	.00	.48	.48	-.16	-.27	-.32
OP	599786	22217	.69	.05	.15	.69	.10	.00	.00	.45	-.21	-.17	.45	-.32
OP	599790	22217	.63	.63	.08	.08	.20	.00	.00	.46	.46	-.18	-.26	-.24
OP	599793	22217	.85	.12	.85	.02	.01	.00	.00	.28	-.16	.28	-.22	-.13
OP	599798	22217	.91	.01	.03	.91	.04	.00	.00	.33	-.16	-.24	.33	-.17
OP	599802	22217	.59	.59	.09	.22	.10	.00	.00	.42	.42	-.21	-.16	-.27
OP	599805	22217	.72	.07	.72	.09	.12	.00	.00	.43	-.13	.43	-.29	-.24
OP	599811	22217	.55	.21	.18	.55	.06	.00	.00	.44	-.20	-.21	.44	-.23
OP	599812	22217	.92	.02	.92	.02	.04	.00	.00	.32	-.20	.32	-.18	-.16
OP	599813	22217	.72	.05	.14	.08	.72	.00	.00	.36	-.23	-.15	-.21	.36
OP	599838	22217	.63	.18	.63	.06	.13	.00	.00	.47	-.34	.47	-.18	-.15
OP	599839	22217	.75	.75	.09	.01	.15	.00	.00	.30	.30	-.28	-.15	-.09
OP	599841	22217	.76	.08	.15	.00	.76	.00	.00	.48	-.16	-.44	-.09	.48
OP	599851	22217	.81	.10	.81	.06	.03	.00	.00	.58	-.40	.58	-.27	-.24
OP	599855	22217	.71	.24	.71	.02	.02	.00	.00	.56	-.46	.56	-.19	-.18
OP	599883	22217	.67	.08	.13	.67	.12	.00	.00	.48	-.24	-.31	.48	-.17
OP	599888	22217	.68	.28	.68	.02	.02	.00	.00	.53	-.49	.53	-.08	-.11
OP	599894	22217	.83	.05	.08	.83	.03	.00	.00	.44	-.28	-.24	.44	-.20
OP	599896	22217	.79	.04	.09	.79	.08	.00	.00	.40	-.19	-.27	.40	-.17
OP	599901	22217	.72	.05	.08	.14	.72	.00	.00	.58	-.28	-.20	-.41	.58
OP	599902	22217	.75	.75	.12	.04	.09	.00	.00	.48	.48	-.31	-.17	-.26
OP	599907	22217	.71	.13	.71	.06	.10	.00	.00	.56	-.20	.56	-.16	-.49
OP	600451	22217	.74	.74	.04	.17	.04	.00	.00	.39	.39	-.22	-.22	-.21
OP	600453	22217	.83	.10	.83	.02	.05	.00	.00	.27	-.16	.27	-.16	-.14
OP	600460	22217	.66	.05	.04	.25	.66	.00	.00	.39	-.22	-.13	-.25	.39
OP	600462	22217	.79	.07	.04	.10	.79	.00	.00	.45	-.20	-.22	-.29	.45
OP	600470	22217	.78	.01	.03	.18	.78	.00	.00	.35	-.14	-.17	-.27	.35
OP	600478	22217	.70	.14	.70	.11	.04	.00	.00	.42	-.25	.42	-.22	-.17
OP	603147	22217	.49	.05	.49	.06	.40	.00	.00	.52	-.10	.52	-.20	-.38
OP	603149	22217	.55	.11	.10	.55	.24	.00	.00	.35	-.09	-.09	.35	-.28

Grade 3 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	633863	22217	.70	.07	.07	.16	.70	.00	.00	.45	-.26	-.17	-.25	.45
OP	633864	22217	.61	.25	.05	.09	.61	.00	.00	.35	-.14	-.25	-.19	.35
OP	633867	22217	.41	.41	.36	.17	.06	.00	.00	.35	.35	-.10	-.20	-.20
OP	633868	22217	.79	.08	.07	.79	.06	.00	.00	.52	-.27	-.23	.52	-.33
OP	633869	22217	.72	.08	.17	.72	.02	.00	.00	.50	-.26	-.33	.50	-.17
OP	633870	22217	.66	.04	.13	.66	.17	.00	.00	.50	-.27	-.26	.50	-.27
OP	633875	22217	.74	.19	.03	.04	.74	.00	.00	.59	-.44	-.23	-.22	.59
OP	633877	22217	.83	.13	.83	.02	.02	.00	.00	.51	-.41	.51	-.20	-.19
OP	633891	22217	.63	.63	.12	.15	.10	.00	.00	.49	.49	-.21	-.28	-.22
OP	633893	22217	.81	.81	.11	.05	.02	.00	.00	.44	.44	-.30	-.20	-.21
OP	633897	22217	.82	.82	.05	.09	.04	.00	.00	.43	.43	-.25	-.25	-.19
OP	633898	22217	.73	.73	.09	.14	.03	.00	.00	.55	.55	-.17	-.41	-.28
OP	633899	22217	.52	.52	.14	.13	.21	.00	.00	.61	.61	-.18	-.27	-.38
FT	646507	2982	.92	.05	.92	.02	.01	.00	.00	.34	-.27	.34	-.14	-.14
FT	646508	2881	.73	.16	.06	.73	.06	.00	.00	.48	-.28	-.25	.48	-.22
FT	646509	2937	.92	.01	.02	.92	.05	.00	.00	.43	-.18	-.21	.43	-.32
FT	646510	2990	.92	.02	.92	.03	.03	.00	.00	.42	-.20	.42	-.24	-.27
FT	646511	2954	.82	.82	.06	.07	.05	.00	.00	.44	.44	-.24	-.26	-.21
FT	646512	2980	.85	.04	.02	.08	.85	.00	.00	.41	-.23	-.19	-.25	.41
FT	646513	2952	.91	.03	.03	.91	.03	.00	.00	.36	-.24	-.16	.36	-.21
FT	646514	10485	.63	.07	.63	.12	.17	.00	.00	.41	-.20	.41	-.24	-.18
FT	646515	2951	.86	.10	.03	.00	.86	.00	.00	.34	-.25	-.20	-.09	.34
FT	646516	2953	.51	.20	.51	.06	.23	.00	.00	.48	-.27	.48	-.09	-.26
FT	646518	2963	.95	.00	.95	.01	.04	.00	.00	.32	-.11	.32	-.13	-.27
FT	646519	10355	.62	.15	.05	.17	.62	.00	.00	.46	-.19	-.26	-.26	.46
FT	646522	2947	.71	.23	.02	.03	.71	.00	.00	.56	-.47	-.21	-.14	.56
FT	646523	2862	.85	.85	.06	.07	.02	.00	.00	.48	.48	-.25	-.33	-.20
FT	646524	3018	.80	.10	.04	.80	.06	.00	.00	.40	-.25	-.19	.40	-.19
FT	646525	10425	.94	.02	.02	.02	.94	.00	.00	.30	-.16	-.18	-.17	.30
FT	646526	2973	.90	.05	.90	.02	.03	.00	.00	.33	-.22	.33	-.15	-.18
FT	646527	2968	.88	.03	.05	.88	.04	.00	.00	.24	-.12	-.09	.24	-.20
FT	646528	2852	.94	.94	.02	.03	.01	.00	.00	.30	.30	-.17	-.18	-.16
FT	646529	2875	.85	.01	.85	.06	.08	.00	.00	.15	-.11	.15	-.07	-.09
FT	646530	2999	.62	.08	.62	.15	.14	.00	.00	.29	-.06	.29	-.16	-.19
FT	646531	10439	.66	.66	.19	.06	.09	.00	.00	.36	.36	-.17	-.14	-.24
FT	646532	2875	.84	.04	.04	.84	.07	.00	.00	.37	-.14	-.17	.37	-.27
FT	646533	10404	.91	.91	.05	.02	.02	.00	.00	.33	.33	-.22	-.18	-.14
FT	646534	2929	.94	.04	.01	.01	.94	.00	.00	.21	-.12	-.15	-.11	.21
FT	646536	10501	.93	.93	.01	.01	.05	.00	.00	.28	.28	-.11	-.12	-.21
FT	646537	2884	.79	.79	.08	.06	.07	.00	.00	.37	.37	-.10	-.23	-.27

Grade 3 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646538	3001	.56	.36	.56	.03	.05	.00	.00	.31	-.11	.31	-.22	-.32
FT	646541	2948	.89	.04	.89	.05	.03	.00	.00	.37	-.18	.37	-.22	-.22
FT	646542	3031	.80	.01	.04	.80	.15	.00	.00	.26	-.16	-.19	.26	-.15
FT	646543	2941	.81	.06	.04	.81	.10	.00	.00	.34	-.17	-.17	.34	-.21
FT	646545	2940	.56	.13	.19	.56	.12	.00	.00	.40	-.39	-.20	.40	.04
FT	646546	2987	.51	.33	.08	.07	.51	.00	.00	.36	-.21	-.10	-.21	.36
FT	646547	2959	.73	.01	.73	.01	.25	.00	.00	.51	-.11	.51	-.11	-.47
FT	646549	3011	.80	.08	.80	.04	.08	.00	.00	.46	-.23	.46	-.29	-.24
FT	646550	2840	.64	.64	.07	.26	.02	.00	.00	.36	.36	-.13	-.25	-.16
FT	646551	2998	.99	.99	.00	.00	.01	.00	.00	.15	.15	-.07	-.08	-.10
FT	646552	2967	.80	.07	.07	.80	.05	.00	.00	.40	-.28	-.14	.40	-.23
FT	646553	2940	.68	.06	.19	.07	.68	.00	.00	.38	-.19	-.25	-.12	.38
FT	646554	2970	.88	.02	.04	.06	.88	.00	.00	.38	-.21	-.14	-.28	.38
FT	646555	2846	.77	.11	.06	.77	.07	.00	.00	.41	-.25	-.26	.41	-.14
FT	646556	10407	.79	.79	.04	.10	.07	.00	.00	.40	.40	-.19	-.18	-.27
FT	646557	2942	.81	.81	.10	.04	.06	.00	.00	.48	.48	-.23	-.22	-.34
FT	646558	10375	.74	.74	.05	.08	.13	.00	.00	.56	.56	-.17	-.23	-.43
FT	646559	2941	.87	.05	.06	.87	.03	.00	.00	.37	-.19	-.23	.37	-.19
FT	646560	2944	.90	.03	.03	.05	.90	.00	.00	.35	-.16	-.20	-.22	.35
FT	646561	2958	.92	.92	.03	.03	.02	.00	.00	.35	.35	-.21	-.21	-.17
FT	646562	10387	.91	.02	.04	.02	.91	.00	.00	.34	-.23	-.18	-.17	.34
FT	646565	10464	.69	.02	.08	.21	.69	.00	.00	.48	-.14	-.27	-.31	.48
FT	646566	3029	.55	.19	.14	.55	.11	.00	.00	.45	-.12	-.26	.45	-.28

Grade 4

Grade 4 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	603918	22033	.81	.04	.07	.08	.81	.00	.00	.47	-.27	-.28	-.22	.47
OP	603920	22033	.68	.68	.05	.02	.25	.00	.00	.49	.49	-.22	-.23	-.34
OP	603924	22033	.77	.07	.10	.77	.06	.00	.00	.43	-.28	-.18	.43	-.23
OP	603927	22033	.77	.12	.07	.04	.77	.00	.00	.50	-.32	-.28	-.16	.50
OP	603934	22033	.84	.05	.06	.84	.04	.00	.00	.45	-.27	-.32	.45	-.12
OP	603940	22033	.90	.04	.04	.90	.02	.00	.00	.34	-.20	-.19	.34	-.19
OP	603947	22033	.61	.03	.17	.18	.61	.00	.00	.44	-.16	-.23	-.25	.44
OP	603954	22033	.52	.27	.20	.52	.01	.00	.00	.40	-.31	-.14	.40	-.06
OP	603955	22033	.68	.18	.07	.68	.06	.00	.00	.39	-.20	-.23	.39	-.18
OP	603960	22033	.84	.05	.04	.08	.84	.00	.00	.44	-.22	-.22	-.27	.44
OP	603962	22033	.77	.77	.16	.06	.01	.00	.00	.39	.39	-.33	-.12	-.12

Grade 4 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	603963	22033	.69	.14	.69	.05	.12	.00	.00	.48	-.29	.48	-.28	-.19
OP	603966	22033	.58	.58	.11	.21	.09	.00	.00	.36	.36	-.15	-.17	-.21
OP	603969	22033	.77	.77	.16	.05	.02	.00	.00	.40	.40	-.29	-.17	-.18
OP	603974	22033	.50	.20	.50	.22	.07	.00	.00	.43	-.19	.43	-.20	-.21
OP	603982	22033	.64	.18	.64	.10	.08	.00	.00	.49	-.23	.49	-.23	-.29
OP	604003	22033	.61	.61	.08	.27	.04	.00	.00	.46	.46	-.20	-.29	-.21
OP	604015	22033	.71	.09	.71	.08	.12	.00	.00	.49	-.30	.49	-.27	-.20
OP	604020	22033	.74	.74	.05	.07	.13	.00	.00	.41	.41	-.22	-.20	-.22
OP	604045	22033	.51	.12	.17	.20	.51	.00	.00	.49	-.27	-.22	-.18	.49
OP	604055	22033	.71	.03	.12	.71	.14	.00	.00	.43	-.23	-.26	.43	-.20
OP	604057	22033	.82	.82	.05	.08	.04	.00	.00	.51	.51	-.29	-.30	-.22
OP	604063	22033	.91	.04	.03	.02	.91	.00	.00	.36	-.26	-.17	-.16	.36
OP	604070	22033	.80	.06	.01	.13	.80	.00	.00	.35	-.16	-.09	-.27	.35
OP	604077	22033	.56	.17	.56	.19	.08	.00	.00	.41	-.27	.41	-.14	-.18
OP	604081	22033	.95	.95	.03	.01	.00	.00	.00	.31	.31	-.21	-.20	-.09
OP	604083	22033	.84	.84	.12	.02	.02	.00	.00	.38	.38	-.29	-.15	-.15
OP	604091	22033	.73	.11	.09	.73	.07	.00	.00	.43	-.19	-.22	.43	-.25
OP	604095	22033	.70	.07	.12	.12	.70	.00	.00	.49	-.26	-.23	-.27	.49
OP	604096	22033	.58	.58	.07	.18	.17	.00	.00	.57	.57	-.16	-.29	-.34
OP	604100	22033	.53	.53	.26	.13	.08	.00	.00	.53	.53	-.21	-.34	-.21
OP	604106	22033	.74	.74	.18	.02	.06	.00	.00	.50	.50	-.35	-.13	-.28
OP	604128	22033	.52	.13	.04	.31	.52	.00	.00	.46	-.44	-.22	-.08	.46
OP	604143	22033	.57	.03	.26	.14	.57	.00	.00	.43	-.18	-.37	-.06	.43
OP	634166	22033	.72	.10	.72	.02	.16	.00	.00	.48	-.17	.48	-.13	-.40
OP	634167	22033	.54	.10	.28	.54	.08	.00	.00	.34	-.20	-.16	.34	-.14
OP	634169	22033	.56	.14	.08	.56	.22	.00	.00	.48	-.24	-.19	.48	-.25
OP	634173	22033	.70	.04	.70	.17	.09	.00	.00	.55	-.08	.55	-.40	-.30
OP	634177	22033	.65	.24	.65	.04	.07	.00	.00	.42	-.30	.42	-.10	-.21
OP	634178	22033	.76	.07	.06	.76	.11	.00	.00	.36	-.20	-.20	.36	-.18
OP	634186	22033	.75	.75	.03	.13	.09	.00	.00	.56	.56	-.15	-.29	-.42
OP	634187	22033	.60	.22	.07	.10	.60	.00	.00	.60	-.51	-.17	-.12	.60
OP	634189	22033	.69	.09	.13	.69	.08	.00	.00	.44	-.26	-.24	.44	-.16
OP	634192	22033	.68	.07	.20	.68	.05	.00	.00	.47	-.32	-.27	.47	-.14
OP	634194	22033	.46	.05	.46	.20	.29	.00	.00	.45	-.09	.45	-.17	-.30
OP	634196	22033	.65	.18	.11	.65	.06	.00	.00	.55	-.44	-.20	.55	-.12
OP	634197	22033	.65	.09	.12	.15	.65	.00	.00	.52	-.42	-.25	-.14	.52
OP	634200	22033	.54	.15	.11	.21	.54	.00	.00	.38	-.18	-.19	-.16	.38
OP	634201	22033	.81	.09	.04	.81	.05	.00	.00	.50	-.33	-.24	.50	-.23
OP	634202	22033	.74	.17	.02	.74	.07	.00	.00	.51	-.46	-.16	.51	-.12
OP	634206	22033	.76	.01	.76	.01	.21	.00	.00	.47	-.14	.47	-.17	-.39

Grade 4 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	634209	22033	.82	.14	.01	.03	.82	.00	.00	.41	-.31	-.16	-.18	.41
OP	634211	22033	.80	.08	.80	.08	.03	.00	.00	.34	-.19	.34	-.20	-.16
OP	634217	22033	.46	.32	.14	.46	.08	.00	.00	.45	-.17	-.31	.45	-.14
OP	634218	22033	.76	.07	.76	.10	.07	.00	.00	.35	-.25	.35	-.14	-.18
FT	646567	3020	.75	.09	.14	.75	.01	.00	.00	.47	-.36	-.23	.47	-.14
FT	646568	2927	.85	.85	.06	.04	.05	.00	.00	.41	.41	-.30	-.17	-.20
FT	646569	2935	.86	.11	.01	.86	.02	.00	.00	.17	-.10	-.11	.17	-.13
FT	646570	2937	.87	.04	.05	.87	.04	.00	.00	.36	-.20	-.22	.36	-.16
FT	646571	2941	.87	.87	.04	.03	.06	.00	.00	.41	.41	-.23	-.22	-.23
FT	646572	2932	.85	.08	.85	.03	.04	.00	.00	.33	-.18	.33	-.20	-.18
FT	646573	2974	.94	.02	.94	.04	.00	.00	.00	.28	-.15	.28	-.21	-.11
FT	646574	3013	.79	.05	.10	.79	.05	.00	.00	.43	-.26	-.31	.43	-.09
FT	646575	2965	.72	.09	.11	.08	.72	.00	.00	.54	-.28	-.26	-.30	.54
FT	646576	2950	.41	.31	.01	.41	.26	.00	.00	.55	-.25	-.05	.55	-.33
FT	646577	2987	.90	.90	.05	.03	.02	.00	.00	.38	.38	-.27	-.16	-.18
FT	646578	2927	.80	.10	.03	.80	.07	.00	.00	.41	-.23	-.21	.41	-.23
FT	646580	2975	.85	.02	.85	.05	.08	.00	.00	.49	-.13	.49	-.26	-.37
FT	646581	2908	.92	.01	.03	.04	.92	.00	.00	.23	-.01	-.20	-.15	.23
FT	646582	2905	.73	.04	.03	.19	.73	.00	.00	.42	-.17	-.21	-.29	.42
FT	646583	2984	.80	.06	.08	.80	.06	.00	.00	.43	-.22	-.30	.43	-.16
FT	646584	2908	.54	.16	.05	.54	.25	.00	.00	.48	-.41	-.16	.48	-.12
FT	646585	2986	.85	.02	.09	.85	.04	.00	.00	.40	-.09	-.33	.40	-.17
FT	646586	2871	.53	.53	.08	.26	.13	.00	.00	.46	.46	-.14	-.13	-.40
FT	646588	2955	.83	.03	.83	.12	.02	.00	.00	.47	-.12	.47	-.38	-.22
FT	646589	2968	1.00	1.00	.00	.00	.00	.00	.00	.03	.03	-.02	-.04	
FT	646590	10255	.67	.01	.06	.67	.26	.00	.00	.35	-.12	-.10	.35	-.28
FT	646591	2960	.91	.01	.05	.02	.91	.00	.00	.34	-.14	-.22	-.22	.34
FT	646592	2918	.77	.77	.07	.11	.05	.00	.00	.40	.40	-.20	-.18	-.29
FT	646593	2949	.89	.06	.01	.89	.04	.00	.00	.36	-.30	-.09	.36	-.17
FT	646594	2872	.62	.17	.15	.06	.62	.00	.00	.35	-.29	-.11	-.09	.35
FT	646597	2909	.84	.84	.01	.15	.01	.00	.00	.24	.24	-.10	-.19	-.14
FT	646598	10326	.78	.01	.21	.01	.78	.00	.00	.35	-.11	-.31	-.10	.35
FT	646599	2899	.79	.79	.09	.10	.01	.00	.00	.33	.33	-.12	-.25	-.21
FT	646600	10304	.75	.02	.75	.16	.06	.00	.00	.42	-.16	.42	-.26	-.25
FT	646601	2948	.48	.40	.07	.48	.04	.00	.00	.40	-.21	-.24	.40	-.19
FT	646602	2825	.28	.28	.17	.42	.13	.00	.00	.29	.29	-.10	-.06	-.19
FT	646603	10253	.50	.07	.12	.50	.31	.00	.00	.38	-.10	-.16	.38	-.24
FT	646604	2903	.63	.63	.10	.08	.19	.00	.00	.42	.42	-.22	-.20	-.21
FT	646605	10327	.45	.21	.45	.25	.08	.00	.00	.25	-.10	.25	-.09	-.15
FT	646606	2966	.58	.25	.12	.58	.05	.00	.00	.37	-.23	-.26	.37	-.01

Grade 4 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646607	10317	.69	.10	.69	.13	.09	.00	.00	.57	-.23	.57	-.29	-.34
FT	646609	2901	.63	.10	.17	.63	.09	.00	.00	.48	-.16	-.29	.48	-.25
FT	646610	2902	.79	.08	.06	.08	.79	.00	.00	.31	-.10	-.21	-.18	.31
FT	646793	10336	.81	.08	.05	.81	.05	.00	.00	.47	-.33	-.15	.47	-.26
FT	646796	10291	.95	.95	.02	.01	.01	.00	.00	.24	.24	-.17	-.11	-.13
FT	646797	2902	.74	.01	.03	.22	.74	.00	.00	.35	-.18	-.14	-.26	.35
FT	646798	3026	.59	.39	.59	.02	.01	.00	.00	.37	-.32	.37	-.12	-.11
FT	646799	2906	.58	.19	.58	.08	.15	.00	.00	.22	-.04	.22	-.11	-.18
FT	646800	10220	.83	.04	.83	.06	.07	.00	.00	.28	-.16	.28	-.22	-.07
FT	646801	2925	.64	.13	.05	.19	.64	.00	.00	.28	-.07	-.22	-.16	.28
FT	646802	2917	.84	.04	.84	.10	.02	.00	.00	.42	-.23	.42	-.26	-.22
FT	646803	2973	.87	.05	.03	.05	.87	.00	.00	.45	-.23	-.22	-.28	.45
FT	646805	2824	.98	.00	.00	.98	.01	.00	.00	.13	-.06	-.08	.13	-.08
FT	646806	10278	.78	.03	.12	.78	.07	.00	.00	.38	-.17	-.25	.38	-.17

Grade 5

Grade 5 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	603386	21689	.78	.02	.17	.78	.02	.00	.00	.41	-.20	-.30	.41	-.18
OP	603388	21689	.78	.14	.78	.05	.04	.00	.00	.44	-.28	.44	-.23	-.20
OP	603394	21689	.86	.04	.86	.05	.05	.00	.00	.47	-.21	.47	-.28	-.29
OP	603399	21689	.82	.07	.05	.06	.82	.00	.00	.48	-.23	-.28	-.27	.48
OP	603407	21689	.69	.17	.09	.69	.05	.00	.00	.39	-.19	-.14	.39	-.32
OP	603414	21689	.85	.05	.07	.03	.85	.00	.00	.48	-.26	-.28	-.24	.48
OP	603415	21689	.68	.68	.11	.04	.17	.00	.00	.37	.37	-.31	-.25	-.06
OP	603428	21689	.70	.10	.06	.14	.70	.00	.00	.49	-.29	-.24	-.23	.49
OP	603429	21689	.75	.05	.03	.17	.75	.00	.00	.50	-.23	-.20	-.35	.50
OP	603435	21689	.85	.05	.05	.05	.85	.00	.00	.44	-.24	-.24	-.24	.44
OP	603436	21689	.67	.05	.12	.67	.16	.00	.00	.37	-.18	-.15	.37	-.23
OP	603440	21689	.82	.82	.11	.05	.02	.00	.00	.41	.41	-.20	-.28	-.22
OP	603446	21689	.76	.76	.07	.13	.05	.00	.00	.48	.48	-.27	-.26	-.25
OP	603447	21689	.70	.06	.07	.70	.17	.00	.00	.39	-.20	-.26	.39	-.17
OP	603452	21689	.74	.74	.18	.03	.04	.00	.00	.41	.41	-.25	-.21	-.22
OP	603453	21689	.79	.14	.79	.06	.01	.00	.00	.34	-.27	.34	-.14	-.12
OP	603454	21689	.71	.24	.02	.71	.02	.00	.00	.36	-.25	-.21	.36	-.16
OP	603459	21689	.59	.24	.13	.04	.59	.00	.00	.43	-.31	-.09	-.25	.43
OP	603476	21689	.68	.13	.18	.02	.68	.00	.00	.58	-.20	-.48	-.16	.58
OP	603482	21689	.62	.62	.29	.06	.03	.00	.00	.45	.45	-.35	-.17	-.10

Grade 5 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	603491	21689	.72	.14	.04	.10	.72	.00	.00	.56	-.40	-.21	-.24	.56
OP	603500	21689	.61	.61	.12	.18	.10	.00	.00	.45	.45	-.31	-.15	-.20
OP	603520	21689	.77	.03	.13	.77	.08	.00	.00	.43	-.22	-.30	.43	-.16
OP	603541	21689	.80	.80	.03	.01	.15	.00	.00	.35	.35	-.22	-.20	-.22
OP	603545	21689	.81	.13	.81	.05	.02	.00	.00	.31	-.13	.31	-.26	-.16
OP	603551	21689	.89	.89	.03	.05	.03	.00	.00	.41	.41	-.21	-.26	-.21
OP	603573	21689	.57	.04	.06	.57	.33	.00	.00	.48	-.29	-.16	.48	-.30
OP	603576	21689	.66	.02	.29	.02	.66	.00	.00	.51	-.19	-.40	-.17	.51
OP	603578	21689	.81	.81	.09	.04	.06	.00	.00	.24	.24	-.05	-.16	-.20
OP	603616	21689	.58	.16	.15	.58	.11	.00	.00	.48	-.27	-.21	.48	-.19
OP	603627	21689	.63	.21	.13	.63	.03	.00	.00	.54	-.33	-.32	.54	-.11
OP	603666	21689	.82	.04	.82	.06	.08	.00	.00	.45	-.16	.45	-.28	-.27
OP	603678	21689	.68	.05	.68	.23	.04	.00	.00	.45	-.24	.45	-.32	-.12
OP	603689	21689	.71	.12	.03	.71	.14	.00	.00	.47	-.42	-.22	.47	-.12
OP	603703	21689	.68	.05	.14	.68	.12	.00	.00	.52	-.28	-.26	.52	-.26
OP	634224	21689	.44	.37	.44	.09	.10	.00	.00	.39	-.16	.39	-.24	-.15
OP	634227	21689	.72	.72	.03	.08	.17	.00	.00	.40	.40	-.18	-.09	-.33
OP	634231	21689	.81	.09	.81	.07	.03	.00	.00	.42	-.22	.42	-.27	-.19
OP	634233	21689	.64	.04	.30	.64	.02	.00	.00	.57	-.11	-.51	.57	-.13
OP	634234	21689	.65	.09	.19	.06	.65	.00	.00	.50	-.24	-.24	-.30	.50
OP	634242	21689	.43	.19	.29	.09	.43	.00	.00	.38	-.09	-.18	-.24	.38
OP	634246	21689	.66	.02	.02	.31	.66	.00	.00	.27	-.08	-.17	-.20	.27
OP	634249	21689	.80	.08	.80	.05	.07	.00	.00	.45	-.32	.45	-.26	-.14
OP	634250	21689	.80	.05	.10	.80	.05	.00	.00	.36	-.17	-.25	.36	-.14
OP	634254	21689	.67	.06	.67	.25	.02	.00	.00	.35	-.20	.35	-.21	-.17
OP	634256	21689	.75	.11	.05	.75	.10	.00	.00	.38	-.19	-.17	.38	-.25
OP	634260	21689	.68	.06	.20	.05	.68	.00	.00	.41	-.33	-.16	-.20	.41
OP	634262	21689	.61	.09	.61	.16	.14	.00	.00	.30	-.21	.30	-.07	-.17
OP	634266	21689	.70	.70	.07	.19	.05	.00	.00	.40	.40	-.25	-.20	-.19
OP	634267	21689	.59	.59	.09	.09	.23	.00	.00	.36	.36	-.21	-.22	-.13
OP	634272	21689	.77	.77	.07	.09	.07	.00	.00	.57	.57	-.29	-.35	-.26
OP	634275	21689	.71	.04	.07	.71	.17	.00	.00	.34	-.18	-.14	.34	-.21
OP	634279	21689	.87	.02	.08	.03	.87	.00	.00	.41	-.20	-.25	-.23	.41
OP	634284	21689	.79	.05	.07	.79	.10	.00	.00	.48	-.28	-.27	.48	-.23
OP	634285	21689	.63	.19	.14	.04	.63	.00	.00	.53	-.26	-.33	-.20	.53
FT	646611	2878	.82	.02	.13	.82	.03	.00	.00	.45	-.12	-.32	.45	-.29
FT	646612	9993	.79	.09	.79	.08	.04	.00	.00	.41	-.18	.41	-.26	-.21
FT	646613	10055	.67	.08	.13	.67	.12	.00	.00	.30	-.20	-.11	.30	-.14
FT	646615	2902	.65	.11	.09	.65	.15	.00	.00	.36	-.22	-.14	.36	-.17
FT	646616	10034	.68	.09	.15	.07	.68	.00	.00	.52	-.29	-.28	-.22	.52

Grade 5 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646617	2872	.75	.11	.75	.11	.02	.00	.00	.52	-.32	.52	-.32	-.16
FT	646618	2919	.72	.03	.24	.02	.72	.00	.00	.62	-.13	-.55	-.19	.62
FT	646620	10032	.65	.12	.11	.65	.12	.00	.00	.42	-.20	-.23	.42	-.19
FT	646621	10085	.63	.63	.23	.07	.06	.00	.00	.45	.45	-.24	-.19	-.27
FT	646622	10048	.82	.04	.06	.09	.82	.00	.00	.45	-.24	-.22	-.27	.45
FT	646623	3035	.31	.31	.24	.17	.28	.00	.00	.20	.20	-.11	-.17	.05
FT	646624	2977	.47	.33	.15	.47	.05	.00	.00	.34	-.11	-.21	.34	-.17
FT	646625	10041	.81	.04	.03	.12	.81	.00	.00	.42	-.19	-.22	-.27	.42
FT	646626	2885	.74	.22	.74	.02	.02	.00	.00	.28	-.18	.28	-.17	-.14
FT	646627	2945	.44	.43	.44	.12	.01	.00	.00	.45	-.39	.45	-.07	-.09
FT	646628	2806	.79	.03	.13	.05	.79	.00	.00	.56	-.16	-.49	-.17	.56
FT	646629	2909	.68	.16	.09	.07	.68	.00	.00	.53	-.22	-.27	-.34	.53
FT	646630	2952	.58	.58	.25	.14	.04	.00	.00	.29	.29	-.21	-.09	-.13
FT	646631	2882	.54	.04	.04	.38	.54	.00	.00	.35	-.10	-.19	-.24	.35
FT	646632	2858	.78	.78	.06	.03	.13	.00	.00	.41	.41	-.25	-.28	-.18
FT	646633	2898	.88	.01	.05	.88	.06	.00	.00	.22	-.07	-.11	.22	-.17
FT	646634	2902	.29	.06	.29	.48	.18	.00	.00	.05	-.22	.05	.15	-.12
FT	646635	2877	.73	.73	.13	.09	.05	.00	.00	.43	.43	-.37	-.09	-.18
FT	646636	10029	.80	.80	.04	.08	.07	.00	.00	.42	.42	-.23	-.18	-.28
FT	646638	2951	.76	.06	.18	.76	.01	.00	.00	.33	-.22	-.22	.33	-.06
FT	646640	2853	.85	.14	.00	.01	.85	.00	.00	.30	-.24	-.12	-.18	.30
FT	646641	2909	.83	.16	.83	.01	.00	.00	.00	.34	-.31	.34	-.12	-.07
FT	646643	2860	.50	.01	.35	.14	.50	.00	.00	.26	-.12	-.19	-.08	.26
FT	646645	2835	.45	.23	.23	.08	.45	.00	.00	.43	-.43	-.06	-.02	.43
FT	646646	2923	.54	.12	.22	.12	.54	.00	.00	.42	-.26	-.27	-.05	.42
FT	646647	2920	.77	.14	.07	.77	.01	.00	.00	.44	-.40	-.12	.44	-.12
FT	646648	2888	.03	.10	.75	.03	.12	.00	.00	-.22	-.37	.45	-.22	-.14
FT	646649	2844	.78	.05	.10	.78	.06	.00	.00	.46	-.25	-.24	.46	-.23
FT	646650	2969	.83	.04	.83	.08	.05	.00	.00	.46	-.24	.46	-.25	-.28
FT	646651	2968	.74	.74	.17	.01	.07	.00	.00	.21	.21	-.10	-.08	-.17
FT	646652	2848	.96	.01	.01	.02	.96	.00	.00	.33	-.16	-.21	-.20	.33
FT	646653	10023	.30	.30	.02	.02	.67	.00	.00	.23	.23	-.18	-.16	-.13
FT	646654	3000	.86	.08	.86	.04	.03	.00	.00	.44	-.27	.44	-.26	-.21
FT	646655	2844	.45	.45	.07	.41	.07	.00	.00	.33	.33	-.16	-.12	-.25
FT	646656	2894	.71	.71	.16	.09	.03	.00	.00	.48	.48	-.29	-.26	-.20
FT	646657	2949	.41	.08	.42	.41	.09	.00	.00	.37	-.14	-.24	.37	-.09
FT	646658	3049	.63	.06	.63	.07	.24	.00	.00	.36	-.20	.36	-.22	-.17
FT	646661	2954	.90	.02	.90	.04	.04	.00	.00	.31	-.22	.31	-.17	-.14
FT	646662	2884	.94	.02	.03	.02	.94	.00	.00	.25	-.14	-.08	-.23	.25
FT	646664	2911	.89	.01	.03	.89	.07	.00	.00	.35	-.21	-.12	.35	-.27

Grade 5 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646665	10062	.83	.02	.12	.83	.02	.00	.00	.37	-.12	-.30	.37	-.15
FT	646666	2957	.57	.20	.09	.15	.57	.00	.00	.38	-.25	-.14	-.13	.38
FT	646667	2923	.50	.21	.50	.09	.20	.00	.00	.53	-.29	.53	-.21	-.22
FT	646668	2922	.51	.04	.43	.51	.02	.00	.00	-.05	-.04	.11	-.05	-.15
FT	646669	2926	.83	.09	.04	.04	.83	.00	.00	.35	-.15	-.31	-.14	.35

Grade 6

Grade 6 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	603161	21434	.67	.67	.17	.11	.04	.00	.00	.40	.40	-.21	-.24	-.14
OP	603174	21434	.73	.05	.73	.13	.09	.00	.00	.54	-.17	.54	-.28	-.37
OP	603180	21434	.57	.10	.57	.15	.18	.00	.00	.40	-.13	.40	-.22	-.21
OP	603183	21434	.63	.13	.63	.19	.05	.00	.00	.41	-.14	.41	-.30	-.15
OP	603184	21434	.64	.16	.13	.64	.07	.00	.00	.36	-.20	-.16	.36	-.17
OP	603191	21434	.73	.12	.73	.06	.09	.00	.00	.38	-.21	.38	-.25	-.14
OP	603192	21434	.77	.77	.06	.13	.04	.00	.00	.48	.48	-.27	-.28	-.22
OP	603194	21434	.69	.14	.09	.69	.08	.00	.00	.53	-.47	-.13	.53	-.16
OP	603197	21434	.77	.03	.06	.14	.77	.00	.00	.52	-.21	-.30	-.32	.52
OP	603204	21434	.79	.12	.02	.79	.06	.00	.00	.54	-.40	-.23	.54	-.21
OP	603206	21434	.59	.59	.26	.09	.06	.00	.00	.33	.33	-.10	-.27	-.18
OP	603214	21434	.67	.67	.19	.10	.04	.00	.00	.51	.51	-.26	-.31	-.22
OP	603215	21434	.85	.08	.85	.03	.04	.00	.00	.27	-.13	.27	-.17	-.16
OP	603221	21434	.81	.03	.05	.11	.81	.00	.00	.39	-.24	-.21	-.21	.39
OP	603228	21434	.72	.03	.72	.23	.03	.00	.00	.59	-.11	.59	-.53	-.15
OP	603237	21434	.60	.24	.09	.06	.60	.00	.00	.53	-.37	-.25	-.12	.53
OP	603240	21434	.83	.05	.11	.02	.83	.00	.00	.48	-.29	-.33	-.12	.48
OP	603241	21434	.83	.02	.09	.06	.83	.00	.00	.48	-.17	-.41	-.15	.48
OP	603247	21434	.78	.78	.04	.06	.11	.00	.00	.56	.56	-.21	-.27	-.39
OP	603248	21434	.77	.09	.07	.08	.77	.00	.00	.50	-.28	-.26	-.24	.50
OP	603264	21434	.53	.13	.53	.12	.22	.00	.00	.48	-.14	.48	-.24	-.27
OP	603266	21434	.69	.07	.22	.69	.02	.00	.00	.56	-.33	-.38	.56	-.09
OP	603270	21434	.69	.69	.18	.11	.02	.00	.00	.57	.57	-.41	-.26	-.16
OP	603273	21434	.80	.03	.80	.05	.12	.00	.00	.49	-.21	.49	-.26	-.31
OP	603276	21434	.77	.77	.10	.09	.04	.00	.00	.44	.44	-.28	-.25	-.14
OP	603283	21434	.58	.13	.10	.19	.58	.00	.00	.52	-.39	-.19	-.18	.52
OP	603285	21434	.68	.18	.05	.68	.09	.00	.00	.44	-.22	-.27	.44	-.21
OP	603290	21434	.85	.85	.04	.06	.04	.00	.00	.42	.42	-.23	-.24	-.22
OP	603297	21434	.50	.21	.14	.14	.50	.00	.00	.40	-.14	-.15	-.25	.40

Grade 6 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	603299	21434	.85	.06	.08	.85	.01	.00	.00	.50	-.34	-.29	.50	-.17
OP	603306	21434	.70	.04	.70	.25	.02	.00	.00	.42	-.21	.42	-.32	-.10
OP	603309	21434	.66	.04	.05	.66	.25	.00	.00	.44	-.17	-.26	.44	-.27
OP	603312	21434	.79	.13	.79	.02	.06	.00	.00	.34	-.15	.34	-.23	-.24
OP	603314	21434	.83	.01	.14	.01	.83	.00	.00	.26	-.11	-.19	-.15	.26
OP	603320	21434	.66	.16	.66	.10	.08	.00	.00	.55	-.35	.55	-.30	-.17
OP	603335	21434	.82	.00	.18	.00	.82	.00	.00	.40	-.11	-.37	-.11	.40
OP	603346	21434	.45	.45	.28	.19	.08	.00	.00	.48	.48	-.25	-.19	-.20
OP	603349	21434	.60	.60	.02	.05	.33	.00	.00	.44	.44	-.18	-.19	-.31
OP	603366	21434	.59	.04	.32	.05	.59	.00	.00	.37	-.19	-.22	-.20	.37
OP	603367	21434	.75	.09	.75	.11	.05	.00	.00	.43	-.23	.43	-.23	-.23
OP	603369	21434	.81	.05	.08	.05	.81	.00	.00	.53	-.20	-.38	-.25	.53
OP	603376	21434	.87	.02	.06	.05	.87	.00	.00	.38	-.19	-.25	-.19	.38
OP	603382	21434	.84	.03	.04	.08	.84	.00	.00	.50	-.30	-.24	-.29	.50
OP	603712	21434	.78	.08	.01	.13	.78	.00	.00	.41	-.27	-.11	-.25	.41
OP	603715	21434	.71	.15	.71	.06	.08	.00	.00	.48	-.32	.48	-.24	-.16
OP	634358	21434	.78	.02	.18	.78	.03	.00	.00	.55	-.23	-.46	.55	-.13
OP	634359	21434	.65	.15	.65	.07	.13	.00	.00	.51	-.25	.51	-.17	-.32
OP	634365	21434	.71	.08	.13	.09	.71	.00	.00	.50	-.25	-.28	-.24	.50
OP	634376	21434	.57	.18	.57	.21	.03	.00	.00	.46	-.29	.46	-.23	-.13
OP	634395	21434	.80	.05	.13	.80	.01	.00	.00	.45	-.25	-.33	.45	-.11
OP	634401	21434	.66	.12	.03	.66	.19	.00	.00	.47	-.37	-.20	.47	-.17
OP	634405	21434	.74	.14	.08	.04	.74	.00	.00	.47	-.32	-.18	-.23	.47
OP	634408	21434	.58	.17	.04	.58	.21	.00	.00	.33	-.28	-.22	.33	-.04
OP	634409	21434	.65	.12	.65	.11	.12	.00	.00	.46	-.21	.46	-.28	-.19
OP	634416	21434	.67	.29	.02	.67	.01	.00	.00	.51	-.42	-.22	.51	-.13
OP	634426	21434	.72	.06	.11	.72	.11	.00	.00	.45	-.23	-.15	.45	-.32
OP	634430	21434	.87	.10	.87	.01	.01	.00	.00	.24	-.13	.24	-.18	-.16
OP	634433	21434	.53	.16	.27	.53	.04	.00	.00	.49	-.31	-.22	.49	-.17
FT	646670	2674	.91	.03	.05	.91	.01	.00	.00	.44	-.20	-.35	.44	-.16
FT	646672	2802	.79	.79	.05	.14	.01	.00	.00	.49	.49	-.36	-.29	-.14
FT	646673	2652	.90	.06	.03	.90	.01	.00	.00	.26	-.12	-.22	.26	-.15
FT	646674	2784	.71	.16	.05	.08	.71	.00	.00	.55	-.46	-.25	-.10	.55
FT	646675	2723	.84	.05	.08	.03	.84	.00	.00	.34	-.19	-.26	-.06	.34
FT	646676	10281	.53	.53	.11	.29	.06	.00	.00	.39	.39	-.27	-.14	-.19
FT	646677	2650	.64	.64	.20	.05	.11	.00	.00	.50	.50	-.28	-.16	-.30
FT	646678	10160	.84	.02	.06	.07	.84	.00	.00	.36	-.17	-.14	-.28	.36
FT	646679	2719	.79	.04	.11	.07	.79	.00	.00	.33	-.19	-.17	-.18	.33
FT	646680	2884	.70	.70	.13	.11	.06	.00	.00	.53	.53	-.39	-.26	-.13
FT	646681	2747	.87	.04	.05	.87	.04	.00	.00	.22	-.09	-.13	.22	-.15

Grade 6 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646682	2785	.92	.03	.02	.03	.92	.00	.00	.26	-.15	-.15	-.15	.26
FT	646683	2606	.78	.78	.03	.17	.01	.00	.00	.34	.34	-.27	-.19	-.17
FT	646684	10107	.61	.03	.15	.61	.20	.00	.00	.26	-.16	-.26	.26	-.01
FT	646685	2890	.77	.77	.12	.06	.05	.00	.00	.43	.43	-.19	-.33	-.18
FT	646687	2797	.88	.02	.08	.88	.02	.00	.00	.45	-.19	-.33	.45	-.22
FT	646688	2728	.79	.03	.02	.16	.79	.00	.00	.34	-.09	-.17	-.27	.34
FT	646689	2817	.86	.86	.02	.02	.09	.00	.00	.20	.20	-.13	-.19	-.08
FT	646693	10182	.42	.52	.02	.03	.42	.00	.00	.53	-.43	-.13	-.13	.53
FT	646694	10065	.56	.17	.15	.56	.11	.00	.00	.38	-.25	-.11	.38	-.18
FT	646695	2803	.87	.04	.02	.07	.87	.00	.00	.42	-.31	-.15	-.23	.42
FT	646696	2685	.90	.03	.02	.05	.90	.00	.00	.25	-.15	-.11	-.16	.25
FT	646697	2756	.83	.12	.04	.83	.02	.00	.00	.46	-.36	-.23	.46	-.09
FT	646699	2694	.69	.12	.69	.13	.06	.00	.00	.50	-.34	.50	-.29	-.10
FT	646700	2759	.35	.35	.38	.17	.09	.00	.00	.25	.25	-.08	-.11	-.13
FT	646701	10219	.64	.23	.64	.08	.05	.00	.00	.43	-.15	.43	-.31	-.27
FT	646702	2826	.78	.05	.78	.11	.07	.00	.00	.35	-.20	.35	-.16	-.22
FT	646703	2723	.87	.02	.87	.06	.05	.00	.00	.46	-.11	.46	-.29	-.33
FT	646704	2715	.16	.16	.26	.04	.55	.00	.00	.08	.08	-.19	-.25	.21
FT	646706	2656	.68	.24	.68	.05	.03	.00	.00	.31	-.15	.31	-.22	-.17
FT	646707	10087	.46	.11	.46	.42	.01	.00	.00	.31	-.31	.31	-.09	-.12
FT	646709	2763	.79	.15	.03	.03	.79	.00	.00	.45	-.28	-.26	-.24	.45
FT	646711	2691	.76	.10	.76	.07	.07	.00	.00	.48	-.20	.48	-.28	-.29
FT	646712	2823	.89	.89	.04	.05	.02	.00	.00	.41	.41	-.19	-.29	-.21
FT	646713	2693	.67	.24	.06	.03	.67	.00	.00	.60	-.42	-.30	-.18	.60
FT	646714	2814	.57	.34	.05	.04	.57	.00	.00	.57	-.49	-.10	-.14	.57
FT	646716	2702	.92	.04	.92	.03	.01	.00	.00	.43	-.25	.43	-.26	-.22
FT	646717	2693	.44	.10	.08	.44	.38	.00	.00	.18	-.19	-.21	.18	.05
FT	646718	10218	.59	.05	.04	.31	.59	.00	.00	.44	-.21	-.17	-.29	.44
FT	646719	2674	.76	.76	.08	.06	.10	.00	.00	.47	.47	-.21	-.16	-.35
FT	646720	2820	.64	.16	.64	.10	.11	.00	.00	.40	-.35	.40	-.13	-.10
FT	646721	2766	.78	.12	.06	.78	.04	.00	.00	.38	-.13	-.28	.38	-.23
FT	646722	2766	.81	.06	.81	.09	.04	.00	.00	.34	-.20	.34	-.16	-.20
FT	646723	10215	.67	.06	.67	.06	.21	.00	.00	.48	-.14	.48	-.12	-.39
FT	646724	2747	.73	.19	.73	.03	.05	.00	.00	.46	-.35	.46	-.07	-.25
FT	646726	2854	.86	.10	.02	.86	.02	.00	.00	.26	-.15	-.20	.26	-.13
FT	646727	2697	.68	.14	.11	.07	.68	.00	.00	.56	-.28	-.36	-.20	.56
FT	646728	2807	.78	.06	.09	.78	.06	.00	.00	.31	-.27	-.04	.31	-.22
FT	646729	10063	.68	.06	.20	.06	.68	.00	.00	.33	-.15	-.15	-.25	.33
FT	646730	2813	.76	.07	.09	.76	.08	.00	.00	.27	-.07	-.10	.27	-.26
FT	648279	2715	.90	.02	.04	.03	.90	.00	.00	.35	-.16	-.22	-.19	.35

Grade 7

Grade 7 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	599927	21000	.70	.11	.06	.70	.13	.00	.00	.48	-.29	-.21	.48	-.24
OP	599933	21000	.43	.16	.40	.43	.02	.00	.00	.42	.02	-.40	.42	-.16
OP	599936	21000	.77	.09	.77	.09	.05	.00	.00	.41	-.22	.41	-.24	-.19
OP	599943	21000	.89	.07	.89	.03	.00	.00	.00	.31	-.18	.31	-.24	-.12
OP	599953	21000	.82	.12	.02	.82	.04	.00	.00	.54	-.41	-.21	.54	-.22
OP	599957	21000	.60	.11	.16	.13	.60	.00	.00	.56	-.29	-.29	-.23	.56
OP	599969	21000	.51	.23	.12	.51	.14	.00	.00	.56	-.46	-.07	.56	-.18
OP	599972	21000	.64	.13	.11	.64	.12	.00	.00	.51	-.29	-.17	.51	-.29
OP	599980	21000	.63	.28	.05	.05	.63	.00	.00	.64	-.48	-.21	-.22	.64
OP	599990	21000	.78	.07	.13	.03	.78	.00	.00	.49	-.22	-.36	-.17	.49
OP	600013	21000	.42	.31	.24	.42	.04	.00	.00	.37	-.24	-.11	.37	-.13
OP	600020	21000	.59	.17	.59	.18	.05	.00	.00	.40	-.26	.40	-.19	-.10
OP	600027	21000	.70	.70	.16	.10	.05	.00	.00	.44	.44	-.20	-.27	-.21
OP	600032	21000	.66	.66	.07	.23	.04	.00	.00	.42	.42	-.28	-.20	-.20
OP	600036	21000	.77	.05	.11	.06	.77	.00	.00	.57	-.24	-.34	-.30	.57
OP	600043	21000	.59	.22	.59	.09	.10	.00	.00	.38	-.06	.38	-.22	-.34
OP	600048	21000	.60	.60	.21	.14	.05	.00	.00	.44	.44	-.26	-.20	-.18
OP	600054	21000	.68	.09	.11	.68	.12	.00	.00	.50	-.24	-.33	.50	-.18
OP	600058	21000	.78	.08	.78	.08	.06	.00	.00	.47	-.26	.47	-.28	-.21
OP	600061	21000	.61	.61	.12	.16	.11	.00	.00	.53	.53	-.32	-.21	-.24
OP	600076	21000	.59	.26	.59	.09	.05	.00	.00	.49	-.43	.49	-.07	-.13
OP	600077	21000	.65	.25	.05	.05	.65	.00	.00	.48	-.30	-.20	-.24	.48
OP	600093	21000	.60	.60	.30	.08	.02	.00	.00	.34	.34	-.22	-.17	-.13
OP	600109	21000	.62	.08	.21	.09	.62	.00	.00	.44	-.27	-.16	-.28	.44
OP	600123	21000	.57	.18	.12	.57	.12	.00	.00	.41	-.16	-.30	.41	-.12
OP	600481	21000	.74	.10	.10	.74	.06	.00	.00	.56	-.23	-.38	.56	-.25
OP	600493	21000	.81	.03	.11	.81	.05	.00	.00	.41	-.23	-.27	.41	-.17
OP	600880	21000	.50	.50	.11	.36	.03	.00	.00	.40	.40	-.08	-.31	-.16
OP	634514	21000	.82	.03	.08	.82	.07	.00	.00	.60	-.15	-.39	.60	-.38
OP	634515	21000	.67	.10	.67	.18	.05	.00	.00	.58	-.19	.58	-.48	-.15
OP	634517	21000	.68	.02	.68	.23	.06	.00	.00	.55	-.13	.55	-.43	-.23
OP	634519	21000	.63	.14	.63	.11	.12	.00	.00	.59	-.32	.59	-.34	-.20
OP	634520	21000	.71	.11	.05	.13	.71	.00	.00	.59	-.28	-.14	-.43	.59
OP	634524	21000	.64	.05	.64	.10	.21	.00	.00	.50	-.20	.50	-.23	-.31
OP	634525	21000	.90	.02	.03	.06	.90	.00	.00	.32	-.20	-.21	-.16	.32
OP	634528	21000	.81	.81	.02	.03	.15	.00	.00	.42	.42	-.17	-.21	-.30
OP	634529	21000	.70	.03	.19	.70	.07	.00	.00	.42	-.21	-.30	.42	-.13
OP	634532	21000	.84	.84	.06	.07	.03	.00	.00	.48	.48	-.27	-.28	-.24

Grade 7 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	634534	21000	.50	.15	.50	.07	.27	.00	.00	.41	-.05	.41	-.10	-.35
OP	634535	21000	.76	.06	.14	.05	.76	.00	.00	.48	-.19	-.36	-.16	.48
OP	634538	21000	.69	.02	.03	.69	.27	.00	.00	.34	-.17	-.15	.34	-.25
OP	634543	21000	.87	.87	.06	.03	.03	.00	.00	.43	.43	-.23	-.27	-.23
OP	634544	21000	.78	.10	.07	.05	.78	.00	.00	.42	-.22	-.24	-.21	.42
OP	634546	21000	.54	.07	.19	.20	.54	.00	.00	.45	-.25	-.29	-.12	.45
OP	634547	21000	.66	.08	.08	.18	.66	.00	.00	.41	-.19	-.18	-.24	.41
OP	634548	21000	.57	.07	.28	.57	.07	.00	.00	.51	-.32	-.32	.51	-.08
OP	634552	21000	.61	.06	.07	.26	.61	.00	.00	.51	-.25	-.24	-.28	.51
OP	634555	21000	.70	.23	.70	.02	.06	.00	.00	.40	-.29	.40	-.14	-.18
OP	634557	21000	.52	.10	.12	.26	.52	.00	.00	.50	-.22	-.35	-.15	.50
OP	634559	21000	.72	.72	.11	.06	.11	.00	.00	.50	.50	-.31	-.27	-.21
OP	634561	21000	.84	.05	.04	.84	.07	.00	.00	.54	-.32	-.30	.54	-.26
OP	634564	21000	.78	.07	.07	.78	.08	.00	.00	.49	-.27	-.22	.49	-.29
OP	634566	21000	.89	.89	.05	.05	.01	.00	.00	.50	.50	-.29	-.32	-.20
OP	634568	21000	.65	.14	.65	.16	.05	.00	.00	.51	-.13	.51	-.41	-.23
OP	634574	21000	.60	.08	.60	.14	.18	.00	.00	.33	-.19	.33	-.18	-.11
OP	634576	21000	.76	.14	.04	.76	.06	.00	.00	.46	-.38	-.11	.46	-.18
OP	634584	21000	.41	.41	.33	.23	.03	.00	.00	.47	.47	-.29	-.15	-.19
OP	634586	21000	.62	.06	.06	.27	.62	.00	.00	.38	-.21	-.14	-.24	.38
FT	646868	9404	.66	.18	.09	.07	.66	.00	.00	.57	-.25	-.30	-.35	.57
FT	646870	2951	.74	.07	.07	.12	.74	.00	.00	.62	-.20	-.31	-.44	.62
FT	646871	2827	.66	.13	.08	.14	.66	.00	.00	.48	-.33	-.16	-.23	.48
FT	646872	2856	.37	.35	.37	.17	.11	.00	.00	.43	-.13	.43	-.24	-.18
FT	646873	2926	.54	.17	.20	.54	.09	.00	.00	.46	-.08	-.37	.46	-.19
FT	646874	9299	.67	.05	.67	.09	.19	.00	.00	.49	-.21	.49	-.24	-.30
FT	646875	2910	.54	.16	.54	.27	.04	.00	.00	.44	-.21	.44	-.25	-.17
FT	646876	2920	.28	.18	.28	.39	.15	.00	.00	.28	-.22	.28	-.05	-.05
FT	646877	2882	.64	.06	.15	.64	.15	.00	.00	.38	-.17	-.31	.38	-.09
FT	646878	2925	.44	.44	.36	.08	.11	.00	.00	.29	.29	-.06	-.20	-.19
FT	646879	9337	.60	.19	.60	.13	.08	.00	.00	.41	-.19	.41	-.26	-.14
FT	646881	2882	.52	.52	.26	.10	.12	.00	.00	.39	.39	-.11	-.15	-.31
FT	646883	2930	.75	.75	.15	.07	.02	.00	.00	.42	.42	-.27	-.26	-.12
FT	646884	2811	.63	.16	.09	.63	.13	.00	.00	.50	-.27	-.25	.50	-.21
FT	646885	2955	.91	.04	.04	.91	.02	.00	.00	.41	-.31	-.20	.41	-.16
FT	646887	9444	.64	.64	.31	.04	.01	.00	.00	.27	.27	-.19	-.12	-.15
FT	646889	2943	.88	.01	.09	.88	.01	.00	.00	.35	-.12	-.29	.35	-.13
FT	646890	2786	.67	.04	.20	.09	.67	.00	.00	.48	-.29	-.26	-.24	.48
FT	646891	2929	.82	.02	.02	.13	.82	.00	.00	.35	-.21	-.18	-.23	.35
FT	646892	9328	.75	.05	.15	.75	.05	.00	.00	.33	-.03	-.22	.33	-.26

Grade 7 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646893	2900	.33	.20	.29	.17	.33	.00	.00	.35	.07	-.18	-.29	.35
FT	646894	2892	.53	.19	.17	.11	.53	.00	.00	.33	-.15	-.16	-.14	.33
FT	646895	2952	.68	.19	.05	.68	.08	.00	.00	.41	-.27	-.26	.41	-.09
FT	646896	2888	.32	.32	.27	.15	.26	.00	.00	.46	.46	-.09	-.23	-.21
FT	646897	9319	.40	.14	.39	.40	.06	.00	.00	.34	-.20	-.14	.34	-.10
FT	646898	2906	.73	.08	.73	.15	.04	.00	.00	.17	-.17	.17	-.06	-.04
FT	646899	2963	.49	.41	.07	.49	.03	.00	.00	.34	-.18	-.26	.34	-.07
FT	646900	2999	.47	.12	.06	.47	.35	.00	.00	.43	-.28	-.25	.43	-.13
FT	646902	2837	.59	.12	.59	.07	.22	.00	.00	.33	-.26	.33	-.23	-.05
FT	646903	2915	.74	.05	.15	.07	.74	.00	.00	.54	-.28	-.32	-.25	.54
FT	646904	2962	.47	.12	.33	.08	.47	.00	.00	.43	-.30	-.13	-.20	.43
FT	646907	2894	.59	.59	.08	.31	.02	.00	.00	.49	.49	-.21	-.34	-.18
FT	646908	2929	.45	.45	.31	.16	.08	.00	.00	.37	.37	-.08	-.22	-.24
FT	646909	9408	.83	.83	.07	.07	.02	.00	.00	.50	.50	-.30	-.31	-.19
FT	646910	2842	.77	.05	.09	.77	.10	.00	.00	.49	-.20	-.33	.49	-.23
FT	646911	2901	.66	.66	.20	.10	.04	.00	.00	.37	.37	-.13	-.29	-.19
FT	646912	2905	.42	.42	.12	.38	.08	.00	.00	.35	.35	-.13	-.21	-.10
FT	646913	3035	.51	.16	.51	.15	.19	.00	.00	.23	-.08	.23	-.18	-.06
FT	646914	9267	.38	.29	.16	.38	.16	.00	.00	.26	-.11	-.14	.26	-.05
FT	646915	2894	.64	.09	.64	.15	.11	.00	.00	.37	-.18	.37	-.23	-.14
FT	646916	2913	.51	.13	.20	.51	.16	.00	.00	.27	-.09	-.21	.27	-.05
FT	646917	2862	.54	.07	.28	.10	.54	.00	.00	.27	-.15	-.12	-.14	.27
FT	646918	3008	.50	.07	.50	.23	.20	.00	.00	.32	-.14	.32	-.19	-.11
FT	646919	9428	.59	.14	.11	.15	.59	.00	.00	.42	-.14	-.22	-.25	.42
FT	646920	2835	.27	.27	.08	.53	.12	.00	.00	.41	.41	-.22	-.16	-.12
FT	646921	2980	.34	.34	.06	.45	.15	.00	.00	.39	.39	-.17	-.28	-.01
FT	646922	2932	.34	.34	.22	.29	.15	.00	.00	.47	.47	-.23	-.22	-.07
FT	646923	2890	.46	.10	.46	.17	.26	.00	.00	.35	-.09	.35	-.24	-.13
FT	646924	2907	.50	.22	.50	.18	.10	.00	.00	.33	-.08	.33	-.26	-.10
FT	646925	9352	.40	.21	.18	.20	.40	.00	.00	.38	-.10	-.15	-.21	.38

Grade 8

Grade 8 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	600140	20806	.67	.08	.67	.08	.16	.00	.00	.44	-.22	.44	-.25	-.21
OP	600144	20806	.67	.21	.07	.67	.04	.00	.00	.34	-.15	-.21	.34	-.21
OP	600151	20806	.48	.23	.21	.48	.07	.00	.00	.60	-.34	-.27	.60	-.17
OP	600158	20806	.70	.05	.09	.70	.16	.00	.00	.47	-.23	-.30	.47	-.21

Grade 8 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	600167	20806	.70	.70	.12	.11	.07	.00	.00	.54	.54	-.32	-.28	-.21
OP	600169	20806	.68	.68	.12	.14	.05	.00	.00	.49	.49	-.24	-.28	-.23
OP	600187	20806	.60	.60	.05	.30	.04	.00	.00	.48	.48	-.23	-.30	-.22
OP	600194	20806	.76	.05	.10	.09	.76	.00	.00	.50	-.29	-.25	-.27	.50
OP	600225	20806	.70	.70	.07	.20	.03	.00	.00	.47	.47	-.23	-.30	-.19
OP	600230	20806	.65	.25	.08	.65	.02	.00	.00	.35	-.13	-.32	.35	-.17
OP	600250	20806	.56	.14	.09	.56	.21	.00	.00	.44	-.26	-.13	.44	-.22
OP	600253	20806	.61	.11	.61	.15	.13	.00	.00	.44	-.23	.44	-.24	-.17
OP	600260	20806	.72	.04	.20	.05	.72	.00	.00	.56	-.18	-.39	-.30	.56
OP	600261	20806	.62	.11	.22	.06	.62	.00	.00	.57	-.40	-.22	-.26	.57
OP	600267	20806	.60	.16	.60	.09	.14	.00	.00	.51	-.08	.51	-.31	-.37
OP	600301	20806	.71	.07	.07	.15	.71	.00	.00	.47	-.24	-.23	-.26	.47
OP	600303	20806	.79	.05	.13	.79	.03	.00	.00	.48	-.22	-.33	.48	-.20
OP	600312	20806	.54	.54	.09	.28	.09	.00	.00	.38	.38	-.29	-.13	-.14
OP	600319	20806	.68	.68	.13	.09	.10	.00	.00	.48	.48	-.25	-.26	-.21
OP	600332	20806	.65	.08	.65	.24	.03	.00	.00	.49	-.17	.49	-.38	-.12
OP	600337	20806	.77	.08	.03	.12	.77	.00	.00	.44	-.20	-.22	-.28	.44
OP	600363	20806	.63	.10	.12	.14	.63	.00	.00	.55	-.30	-.28	-.23	.55
OP	600371	20806	.62	.14	.08	.16	.62	.00	.00	.56	-.24	-.25	-.32	.56
OP	600382	20806	.87	.04	.87	.04	.04	.00	.00	.43	-.24	.43	-.23	-.24
OP	600510	20806	.69	.16	.07	.08	.69	.00	.00	.58	-.30	-.28	-.29	.58
OP	600513	20806	.59	.06	.19	.59	.16	.00	.00	.38	-.18	-.20	.38	-.17
OP	600522	20806	.73	.06	.73	.13	.08	.00	.00	.39	-.19	.39	-.14	-.28
OP	603724	20806	.78	.78	.13	.06	.04	.00	.00	.48	.48	-.24	-.27	-.28
OP	634588	20806	.59	.05	.05	.30	.59	.00	.00	.57	-.21	-.26	-.38	.57
OP	634592	20806	.77	.05	.07	.77	.10	.00	.00	.44	-.24	-.23	.44	-.23
OP	634597	20806	.56	.15	.17	.12	.56	.00	.00	.38	-.23	-.12	-.19	.38
OP	634599	20806	.54	.54	.31	.09	.06	.00	.00	.43	.43	-.25	-.21	-.14
OP	634603	20806	.67	.19	.67	.08	.06	.00	.00	.45	-.23	.45	-.24	-.24
OP	634604	20806	.76	.18	.03	.03	.76	.00	.00	.48	-.35	-.21	-.19	.48
OP	634608	20806	.41	.27	.41	.22	.10	.00	.00	.35	-.04	.35	-.20	-.23
OP	634612	20806	.84	.05	.02	.08	.84	.00	.00	.34	-.05	-.19	-.29	.34
OP	634613	20806	.56	.56	.23	.13	.09	.00	.00	.29	.29	-.13	-.06	-.23
OP	634616	20806	.74	.08	.74	.10	.08	.00	.00	.57	-.30	.57	-.32	-.27
OP	634620	20806	.62	.62	.19	.09	.10	.00	.00	.34	.34	-.17	-.15	-.17
OP	634625	20806	.75	.07	.12	.75	.06	.00	.00	.39	-.18	-.18	.39	-.27
OP	634628	20806	.85	.03	.85	.05	.07	.00	.00	.50	-.22	.50	-.25	-.33
OP	634630	20806	.61	.12	.20	.61	.07	.00	.00	.55	-.28	-.32	.55	-.18
OP	634633	20806	.79	.05	.79	.10	.05	.00	.00	.50	-.20	.50	-.35	-.22
OP	634637	20806	.52	.23	.52	.18	.06	.00	.00	.38	-.16	.38	-.27	-.07

Grade 8 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	634638	20806	.61	.11	.61	.14	.14	.00	.00	.54	-.28	.54	-.32	-.18
OP	634643	20806	.62	.62	.04	.04	.30	.00	.00	.55	.55	-.24	-.25	-.37
OP	634644	20806	.65	.65	.13	.06	.15	.00	.00	.38	.38	-.18	-.27	-.14
OP	634648	20806	.61	.08	.61	.27	.04	.00	.00	.39	-.22	.39	-.23	-.15
OP	634650	20806	.71	.05	.19	.04	.71	.00	.00	.44	-.34	-.19	-.23	.44
OP	634653	20806	.68	.05	.08	.18	.68	.00	.00	.47	-.16	-.29	-.26	.47
OP	634654	20806	.67	.12	.05	.15	.67	.00	.00	.51	-.31	-.24	-.22	.51
OP	634655	20806	.68	.68	.17	.12	.02	.00	.00	.42	.42	-.25	-.24	-.15
OP	634657	20806	.48	.14	.26	.48	.10	.00	.00	.44	-.20	-.30	.44	-.05
OP	634660	20806	.43	.19	.21	.43	.16	.00	.00	.41	-.16	-.30	.41	-.04
OP	634661	20806	.49	.49	.23	.15	.13	.00	.00	.45	.45	-.17	-.21	-.23
OP	634662	20806	.65	.65	.16	.13	.06	.00	.00	.44	.44	-.20	-.28	-.17
OP	634663	20806	.54	.17	.15	.54	.14	.00	.00	.44	-.22	-.28	.44	-.10
OP	634674	20806	.70	.09	.12	.70	.09	.00	.00	.40	-.15	-.31	.40	-.14
OP	634678	20806	.73	.17	.73	.08	.02	.00	.00	.45	-.31	.45	-.20	-.18
OP	634682	20806	.47	.02	.47	.23	.27	.00	.00	.45	-.12	.45	-.25	-.22
FT	646811	9317	.58	.30	.06	.06	.58	.00	.00	.27	-.04	-.23	-.25	.27
FT	646812	2892	.59	.05	.11	.59	.26	.00	.00	.51	-.14	-.26	.51	-.32
FT	646813	2863	.72	.06	.16	.72	.05	.00	.00	.43	-.22	-.27	.43	-.18
FT	646814	2851	.81	.06	.05	.81	.07	.00	.00	.38	-.23	-.15	.38	-.22
FT	646815	2994	.64	.05	.14	.64	.18	.00	.00	.25	-.09	-.01	.25	-.25
FT	646816	9315	.51	.51	.17	.21	.11	.00	.00	.28	.28	-.17	-.08	-.12
FT	646817	2826	.70	.20	.07	.70	.03	.00	.00	.30	-.14	-.19	.30	-.20
FT	646818	2873	.65	.06	.09	.20	.65	.00	.00	.50	-.29	-.17	-.30	.50
FT	646819	2875	.60	.10	.60	.14	.16	.00	.00	.37	-.17	.37	-.20	-.17
FT	646820	2797	.63	.13	.63	.14	.10	.00	.00	.39	-.21	.39	-.13	-.24
FT	646821	9318	.53	.53	.06	.38	.03	.00	.00	.31	.31	-.26	-.10	-.23
FT	646822	2908	.74	.74	.15	.06	.05	.00	.00	.41	.41	-.28	-.26	-.08
FT	646823	2923	.51	.10	.28	.11	.51	.00	.00	.52	-.28	-.28	-.17	.52
FT	646824	2855	.79	.12	.79	.04	.04	.00	.00	.36	-.22	.36	-.28	-.07
FT	646825	2816	.25	.07	.25	.28	.40	.00	.00	.29	-.01	.29	-.04	-.22
FT	646826	2869	.64	.08	.64	.09	.19	.00	.00	.53	-.04	.53	-.24	-.44
FT	646827	2846	.86	.06	.86	.05	.03	.00	.00	.44	-.22	.44	-.28	-.23
FT	646828	2836	.39	.19	.26	.39	.16	.00	.00	.41	-.08	-.21	.41	-.21
FT	646829	2828	.58	.08	.17	.17	.58	.00	.00	.37	-.25	-.20	-.10	.37
FT	646830	2891	.51	.16	.03	.30	.51	.00	.00	.23	-.18	-.16	-.05	.23
FT	646831	9219	.53	.53	.11	.23	.13	.00	.00	.26	.26	-.08	-.10	-.17
FT	646832	2973	.66	.10	.12	.66	.12	.00	.00	.54	-.30	-.38	.54	-.12
FT	646834	9328	.74	.11	.74	.08	.07	.00	.00	.45	-.30	.45	-.24	-.14
FT	646835	2902	.60	.27	.60	.05	.08	.00	.00	.35	-.21	.35	-.19	-.14

Grade 8 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646837	2906	.47	.10	.47	.36	.07	.00	.00	.50	-.18	.50	-.35	-.12
FT	646838	9350	.38	.28	.38	.21	.13	.00	.00	.42	-.22	.42	-.21	-.05
FT	646839	2881	.66	.06	.10	.66	.18	.00	.00	.41	-.17	-.24	.41	-.22
FT	646840	2903	.69	.13	.69	.12	.06	.00	.00	.55	-.31	.55	-.30	-.23
FT	646841	2881	.84	.04	.84	.11	.02	.00	.00	.35	-.23	.35	-.21	-.17
FT	646842	2915	.80	.80	.07	.07	.05	.00	.00	.52	.52	-.26	-.31	-.27
FT	646843	2869	.74	.08	.07	.12	.74	.00	.00	.53	-.24	-.31	-.29	.53
FT	646845	2903	.56	.28	.11	.05	.56	.00	.00	.57	-.24	-.40	-.25	.57
FT	646846	2798	.80	.10	.05	.05	.80	.00	.00	.50	-.33	-.27	-.20	.50
FT	646848	9261	.70	.14	.70	.07	.09	.00	.00	.47	-.23	.47	-.27	-.23
FT	646849	2883	.63	.63	.14	.16	.08	.00	.00	.58	.58	-.33	-.31	-.20
FT	646851	2841	.55	.55	.28	.11	.05	.00	.00	.33	.33	-.14	-.21	-.15
FT	646852	2988	.48	.24	.18	.48	.11	.00	.00	.34	-.08	-.29	.34	-.07
FT	646853	2828	.61	.16	.61	.11	.11	.00	.00	.33	-.23	.33	-.22	-.03
FT	646854	2882	.43	.43	.16	.19	.21	.00	.00	.31	.31	-.10	-.15	-.13
FT	646855	9241	.44	.28	.10	.17	.44	.00	.00	.36	-.01	-.22	-.27	.36
FT	646856	9348	.66	.66	.15	.12	.06	.00	.00	.44	.44	-.25	-.19	-.23
FT	646858	2866	.36	.41	.36	.06	.17	.00	.00	.08	.12	.08	-.20	-.13
FT	646859	2929	.23	.23	.24	.29	.23	.00	.00	.04	.04	-.05	-.03	.04
FT	646861	2854	.64	.64	.07	.02	.28	.00	.00	.27	.27	-.26	-.05	-.13
FT	646862	2893	.44	.17	.23	.15	.44	.00	.00	.45	-.30	-.19	-.08	.45
FT	646863	9310	.65	.28	.04	.65	.02	.00	.00	.45	-.29	-.25	.45	-.19
FT	646864	2830	.49	.49	.44	.03	.04	.00	.00	.46	.46	-.34	-.23	-.13
FT	646865	2894	.40	.07	.40	.47	.06	.00	.00	.42	-.26	.42	-.13	-.29
FT	646866	2809	.61	.03	.13	.61	.23	.00	.00	.42	-.16	-.22	.42	-.24
FT	646867	2807	.45	.45	.17	.25	.12	.00	.00	.42	.42	-.11	-.30	-.10

Grade 11

Grade 11 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	600406	20843	.60	.07	.60	.22	.11	.00	.00	.52	-.20	.52	-.29	-.26
OP	600418	20843	.61	.12	.20	.61	.07	.00	.00	.49	-.19	-.29	.49	-.23
OP	600419	20843	.57	.14	.15	.57	.13	.00	.00	.51	-.20	-.26	.51	-.26
OP	600531	20843	.61	.04	.11	.25	.61	.00	.00	.37	-.17	-.10	-.27	.37
OP	600536	20843	.53	.21	.13	.53	.13	.00	.00	.42	-.04	-.34	.42	-.22

Grade 11 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	600540	20843	.56	.19	.14	.56	.10	.00	.00	.53	-.26	-.32	.53	-.14
OP	600562	20843	.80	.04	.09	.80	.08	.00	.00	.45	-.22	-.30	.45	-.20
OP	600563	20843	.71	.09	.13	.71	.07	.00	.00	.45	-.20	-.29	.45	-.19
OP	600573	20843	.58	.18	.17	.58	.07	.00	.00	.37	-.12	-.24	.37	-.17
OP	600592	20843	.76	.03	.76	.06	.14	.00	.00	.41	-.18	.41	-.25	-.22
OP	600594	20843	.67	.12	.11	.67	.09	.00	.00	.50	-.19	-.32	.50	-.23
OP	600596	20843	.70	.09	.70	.16	.04	.00	.00	.55	-.20	.55	-.40	-.20
OP	600598	20843	.78	.09	.06	.78	.08	.00	.00	.50	-.30	-.29	.50	-.19
OP	600633	20843	.65	.14	.65	.14	.07	.00	.00	.54	-.25	.54	-.35	-.19
OP	600634	20843	.70	.17	.07	.70	.06	.00	.00	.55	-.34	-.29	.55	-.20
OP	600652	20843	.49	.10	.18	.22	.49	.00	.00	.48	-.21	-.18	-.25	.48
OP	600653	20843	.59	.19	.14	.59	.09	.00	.00	.46	-.24	-.23	.46	-.17
OP	600660	20843	.67	.12	.17	.04	.67	.00	.00	.57	-.37	-.28	-.21	.57
OP	600663	20843	.48	.22	.48	.15	.15	.00	.00	.42	-.24	.42	-.06	-.24
OP	600666	20843	.63	.63	.15	.13	.09	.00	.00	.37	.37	-.23	-.22	-.07
OP	600677	20843	.69	.69	.17	.08	.06	.00	.00	.48	.48	-.15	-.33	-.29
OP	600678	20843	.53	.06	.53	.29	.12	.00	.00	.53	-.16	.53	-.35	-.20
OP	600685	20843	.61	.11	.08	.61	.20	.00	.00	.47	-.10	-.19	.47	-.36
OP	600689	20843	.82	.82	.07	.08	.03	.00	.00	.46	.46	-.29	-.26	-.19
OP	600690	20843	.65	.07	.10	.65	.19	.00	.00	.50	-.21	-.31	.50	-.24
OP	600695	20843	.64	.10	.07	.64	.19	.00	.00	.36	-.26	-.28	.36	-.06
OP	600702	20843	.60	.19	.10	.10	.60	.00	.00	.58	-.22	-.34	-.30	.58
OP	600703	20843	.55	.55	.25	.12	.07	.00	.00	.59	.59	-.35	-.25	-.22
OP	600704	20843	.63	.10	.63	.15	.11	.00	.00	.52	-.19	.52	-.37	-.18
OP	600724	20843	.68	.10	.14	.68	.08	.00	.00	.50	-.21	-.32	.50	-.21
OP	600728	20843	.55	.55	.09	.28	.09	.00	.00	.49	.49	-.29	-.20	-.25
OP	600732	20843	.59	.12	.59	.20	.09	.00	.00	.45	-.15	.45	-.28	-.21
OP	600733	20843	.74	.74	.18	.06	.02	.00	.00	.40	.40	-.24	-.22	-.19
OP	600737	20843	.64	.10	.11	.14	.64	.00	.00	.55	-.28	-.29	-.24	.55
OP	600744	20843	.58	.18	.58	.13	.10	.00	.00	.34	-.18	.34	-.21	-.06
OP	600746	20843	.61	.09	.15	.15	.61	.00	.00	.57	-.27	-.30	-.25	.57

Grade 11 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	600756	20843	.74	.74	.09	.12	.05	.00	.00	.42	.42	-.21	-.26	-.17
OP	600758	20843	.58	.15	.16	.58	.11	.00	.00	.41	-.17	-.26	.41	-.14
OP	600767	20843	.47	.25	.47	.15	.13	.00	.00	.21	.07	.21	-.25	-.13
OP	600769	20843	.63	.11	.12	.14	.63	.00	.00	.25	-.20	-.03	-.14	.25
OP	600770	20843	.65	.15	.65	.14	.06	.00	.00	.45	-.19	.45	-.32	-.14
OP	600771	20843	.62	.10	.14	.13	.62	.00	.00	.46	-.17	-.27	-.22	.46
OP	600775	20843	.70	.11	.09	.10	.70	.00	.00	.57	-.36	-.27	-.23	.57
OP	600777	20843	.57	.19	.12	.12	.57	.00	.00	.41	-.09	-.26	-.26	.41
OP	600795	20843	.60	.08	.60	.24	.08	.00	.00	.47	-.15	.47	-.35	-.14
OP	600809	20843	.65	.06	.20	.09	.65	.00	.00	.56	-.28	-.31	-.25	.56
OP	600810	20843	.64	.20	.64	.11	.04	.00	.00	.37	-.08	.37	-.31	-.20
OP	600832	20843	.86	.07	.86	.05	.01	.00	.00	.40	-.28	.40	-.21	-.15
OP	634445	20843	.52	.28	.52	.14	.07	.00	.00	.43	-.20	.43	-.26	-.13
OP	634446	20843	.66	.66	.12	.12	.10	.00	.00	.53	.53	-.27	-.33	-.17
OP	634448	20843	.57	.11	.57	.21	.12	.00	.00	.39	-.17	.39	-.13	-.25
OP	634449	20843	.60	.07	.21	.12	.60	.00	.00	.48	-.20	-.23	-.27	.48
OP	634450	20843	.80	.07	.09	.80	.03	.00	.00	.48	-.24	-.31	.48	-.21
OP	634454	20843	.38	.37	.38	.07	.17	.00	.00	.44	-.14	.44	-.13	-.29
OP	634457	20843	.34	.31	.34	.20	.16	.00	.00	.32	.03	.32	-.21	-.23
OP	634464	20843	.45	.45	.18	.16	.21	.00	.00	.57	.57	-.18	-.27	-.26
OP	634469	20843	.78	.07	.09	.78	.07	.00	.00	.47	-.25	-.32	.47	-.15
OP	634470	20843	.85	.85	.04	.05	.05	.00	.00	.43	.43	-.25	-.20	-.25
OP	634476	20843	.55	.17	.11	.16	.55	.00	.00	.57	-.25	-.21	-.32	.57
OP	634477	20843	.42	.42	.17	.11	.29	.00	.00	.52	.52	-.13	-.19	-.32
FT	646731	2636	.75	.14	.75	.06	.04	.00	.00	.55	-.36	.55	-.25	-.24
FT	646732	2598	.62	.07	.14	.62	.18	.00	.00	.45	-.23	-.25	.45	-.19
FT	646733	2551	.60	.08	.60	.22	.10	.00	.00	.44	-.20	.44	-.28	-.16
FT	646734	2601	.22	.22	.04	.03	.71	.00	.00	-.11	-.11	-.27	-.24	.31
FT	646735	10477	.45	.26	.09	.45	.20	.00	.00	.58	-.37	-.15	.58	-.21
FT	646736	2628	.46	.30	.46	.07	.17	.00	.00	.45	-.15	.45	-.36	-.17
FT	646737	2546	.65	.03	.23	.08	.65	.00	.00	.43	-.21	-.24	-.24	.43

Grade 11 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646739	2588	.52	.28	.52	.16	.05	.00	.00	.26	-.10	.26	-.17	-.11
FT	646740	10484	.69	.12	.69	.09	.10	.00	.00	.52	-.24	.52	-.28	-.28
FT	646741	2549	.42	.17	.42	.21	.20	.00	.00	.33	-.05	.33	-.32	-.03
FT	646742	2531	.36	.14	.37	.13	.36	.00	.00	.32	-.18	-.13	-.08	.32
FT	646743	2669	.27	.27	.36	.27	.10	.00	.00	.21	.21	-.02	-.16	-.04
FT	646744	2554	.60	.07	.13	.20	.60	.00	.00	.44	-.18	-.16	-.29	.44
FT	646745	10450	.49	.25	.49	.17	.07	.00	.00	.39	-.22	.39	-.17	-.13
FT	646746	2619	.20	.09	.32	.39	.20	.00	.00	.34	-.07	-.12	-.13	.34
FT	646747	2506	.57	.19	.57	.14	.10	.00	.00	.42	-.14	.42	-.33	-.12
FT	646753	2610	.66	.13	.15	.66	.05	.00	.00	.37	-.13	-.24	.37	-.18
FT	646754	2585	.36	.07	.35	.23	.36	.00	.00	.51	-.10	-.29	-.20	.51
FT	646755	2594	.81	.81	.07	.07	.05	.00	.00	.52	.52	-.26	-.32	-.26
FT	646756	2643	.51	.51	.14	.15	.21	.00	.00	.59	.59	-.24	-.17	-.37
FT	646757	10521	.56	.16	.03	.25	.56	.00	.00	.53	-.36	-.23	-.20	.53
FT	646758	2571	.56	.06	.56	.27	.11	.00	.00	.53	-.12	.53	-.34	-.26
FT	646759	2584	.44	.44	.11	.33	.11	.00	.00	.36	.36	-.20	-.17	-.11
FT	646760	2603	.63	.63	.09	.15	.12	.00	.00	.43	.43	-.16	-.24	-.22
FT	646761	2613	.39	.39	.20	.11	.30	.00	.00	.24	.24	-.05	-.11	-.13
FT	646762	10459	.42	.10	.42	.27	.20	.00	.00	.41	-.16	.41	-.20	-.15
FT	646765	2580	.69	.09	.69	.08	.13	.00	.00	.47	-.27	.47	-.32	-.15
FT	646768	2528	.42	.06	.14	.38	.42	.00	.00	.37	-.17	-.32	-.06	.37
FT	646769	2591	.55	.03	.23	.19	.55	.00	.00	.51	-.20	-.25	-.29	.51
FT	646770	10452	.51	.11	.51	.30	.07	.00	.00	.48	-.19	.48	-.28	-.18
FT	646771	10403	.53	.14	.53	.20	.13	.00	.00	.54	-.09	.54	-.39	-.24
FT	646772	2581	.65	.05	.22	.09	.65	.00	.00	.50	-.26	-.20	-.35	.50
FT	646773	2583	.60	.12	.22	.06	.60	.00	.00	.64	-.35	-.35	-.22	.64
FT	646774	2645	.28	.28	.13	.27	.31	.00	.00	.41	.41	-.12	-.10	-.21
FT	646775	2630	.75	.75	.11	.07	.07	.00	.00	.54	.54	-.38	-.30	-.16
FT	646776	10465	.38	.29	.21	.12	.38	.00	.00	.56	-.11	-.34	-.24	.56
FT	646777	2558	.38	.24	.18	.20	.38	.00	.00	.45	-.14	-.28	-.13	.45
FT	646778	2605	.28	.42	.19	.11	.28	.00	.00	.31	-.13	-.11	-.11	.31

Grade 11 Mathematics

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	646779	2573	.54	.02	.39	.05	.54	.00	.00	.21	-.16	-.07	-.22	.21
FT	646780	2609	.44	.44	.27	.15	.14	.00	.00	.41	.41	-.23	-.19	-.11
FT	646781	10476	.38	.14	.18	.38	.29	.00	.00	.28	.07	-.02	.28	-.33
FT	646782	2633	.35	.09	.34	.35	.22	.00	.00	.40	-.19	-.17	.40	-.13
FT	646783	2616	.34	.34	.25	.20	.21	.00	.00	.36	.36	-.27	-.17	.04
FT	646784	2601	.49	.49	.27	.09	.15	.00	.00	.53	.53	-.32	-.24	-.16
FT	646785	2616	.74	.08	.05	.74	.13	.00	.00	.40	-.31	-.24	.40	-.11
FT	646786	10523	.57	.57	.16	.13	.13	.00	.00	.52	.52	-.31	-.27	-.14
FT	646787	2608	.37	.07	.05	.51	.37	.00	.00	.39	-.32	-.16	-.13	.39
FT	646788	2626	.75	.06	.10	.75	.09	.00	.00	.47	-.22	-.26	.47	-.25
FT	646789	2559	.59	.08	.22	.59	.11	.00	.00	.34	-.19	-.13	.34	-.21
FT	646790	2514	.47	.15	.15	.47	.23	.00	.00	.37	-.18	-.19	.37	-.13

Appendix J: Science Key Verification and Foil Analysis

Grade 5

Grade 5 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	634836	21693	.79	.79	.06	.10	.05	.00	.00	.42	.42	-.23	-.25	-.20
OP	634838	21693	.56	.22	.15	.07	.56	.00	.00	.35	-.17	-.12	-.25	.35
OP	634839	21693	.64	.64	.10	.10	.16	.00	.00	.44	.44	-.21	-.24	-.20
OP	634840	21693	.89	.01	.01	.10	.89	.00	.00	.34	-.12	-.12	-.29	.34
OP	634844	21693	.90	.02	.04	.04	.90	.00	.00	.44	-.19	-.27	-.26	.44
OP	634845	21693	.84	.07	.04	.84	.05	.00	.00	.44	-.28	-.22	.44	-.22
OP	634849	21693	.71	.09	.08	.71	.11	.00	.00	.47	-.27	-.15	.47	-.29
OP	634852	21693	.73	.05	.73	.18	.04	.00	.00	.30	-.18	.30	-.11	-.26
OP	634854	21693	.55	.13	.55	.10	.21	.00	.00	.41	-.25	.41	-.20	-.14
OP	634856	21693	.55	.11	.55	.24	.10	.00	.00	.37	-.10	.37	-.24	-.15
OP	634859	21693	.71	.10	.08	.71	.11	.00	.00	.27	-.18	-.12	.27	-.10
OP	634861	21693	.85	.04	.85	.07	.03	.00	.00	.49	-.22	.49	-.34	-.24
OP	634864	21693	.66	.05	.25	.04	.66	.00	.00	.46	-.13	-.36	-.18	.46
OP	634868	21693	.48	.14	.03	.34	.48	.00	.00	.42	-.33	-.17	-.13	.42
OP	634873	21693	.78	.11	.05	.06	.78	.00	.00	.42	-.25	-.20	-.21	.42
OP	634874	21693	.68	.68	.17	.06	.09	.00	.00	.49	.49	-.24	-.29	-.23
OP	634876	21693	.78	.04	.78	.01	.18	.00	.00	.36	-.09	.36	-.09	-.33
OP	634880	21693	.77	.10	.77	.09	.04	.00	.00	.47	-.27	.47	-.26	-.21
OP	634885	21693	.90	.01	.01	.90	.08	.00	.00	.31	-.13	-.15	.31	-.24
OP	634886	21693	.55	.12	.55	.12	.21	.00	.00	.34	-.18	.34	-.13	-.18
OP	634889	21693	.53	.18	.13	.17	.53	.00	.00	.29	-.16	-.14	-.10	.29
OP	634894	21693	.76	.09	.07	.07	.76	.00	.00	.39	-.18	-.22	-.21	.39
OP	634900	21693	.67	.04	.67	.10	.19	.00	.00	.23	-.13	.23	-.18	-.08
OP	634901	21693	.39	.39	.06	.48	.08	.00	.00	.40	.40	-.20	-.17	-.24
OP	634905	21693	.57	.08	.20	.57	.15	.00	.00	.35	-.23	-.06	.35	-.24
OP	634906	21693	.64	.08	.17	.64	.10	.00	.00	.52	-.25	-.28	.52	-.24
OP	634911	21693	.68	.68	.15	.09	.08	.00	.00	.43	.43	-.23	-.26	-.16
OP	634916	21693	.71	.14	.02	.14	.71	.00	.00	.38	-.24	-.17	-.18	.38
OP	634917	21693	.66	.66	.19	.06	.09	.00	.00	.42	.42	-.21	-.23	-.22
OP	634921	21693	.67	.15	.10	.08	.67	.00	.00	.44	-.25	-.21	-.19	.44
OP	634922	21693	.71	.13	.09	.08	.71	.00	.00	.47	-.26	-.20	-.26	.47
OP	634929	21693	.64	.07	.16	.12	.64	.00	.00	.54	-.20	-.31	-.28	.54
OP	634930	21693	.49	.13	.49	.10	.28	.00	.00	.33	-.26	.33	-.16	-.07
OP	634934	21693	.66	.66	.09	.07	.18	.00	.00	.47	.47	-.30	-.19	-.23
OP	634936	21693	.80	.02	.16	.02	.80	.00	.00	.41	-.18	-.31	-.17	.41
OP	634938	21693	.50	.13	.16	.20	.50	.00	.00	.24	-.09	-.06	-.16	.24

Grade 5 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	634939	21693	.80	.03	.80	.15	.02	.00	.00	.28	-.14	.28	-.18	-.17
OP	634942	21693	.94	.01	.04	.94	.01	.00	.00	.20	-.10	-.16	.20	-.06
OP	634943	21693	.52	.25	.52	.15	.07	.00	.00	.37	-.08	.37	-.25	-.21
OP	634945	21693	.48	.33	.09	.48	.10	.00	.00	.38	-.16	-.28	.38	-.11
OP	634947	21693	.79	.79	.03	.13	.04	.00	.00	.42	.42	-.19	-.27	-.22
OP	634950	21693	.55	.09	.22	.55	.13	.00	.00	.42	-.19	-.06	.42	-.37
OP	634956	21693	.75	.75	.06	.16	.03	.00	.00	.45	.45	-.27	-.26	-.21
OP	634958	21693	.76	.76	.14	.07	.03	.00	.00	.38	.38	-.24	-.21	-.14
OP	634961	21693	.46	.23	.11	.46	.20	.00	.00	.37	-.21	-.19	.37	-.09
OP	634962	21693	.67	.07	.67	.08	.19	.00	.00	.27	-.26	.27	-.05	-.12
OP	634963	21693	.63	.11	.63	.10	.16	.00	.00	.50	-.24	.50	-.25	-.24
OP	634968	21693	.67	.67	.15	.10	.08	.00	.00	.40	.40	-.24	-.15	-.21
OP	634969	21693	.69	.08	.14	.09	.69	.00	.00	.46	-.26	-.24	-.21	.46
OP	634979	21693	.56	.09	.11	.23	.56	.00	.00	.34	-.11	-.35	-.06	.34
FT	647385	3642	.64	.04	.64	.04	.27	.00	.00	.26	-.14	.26	-.15	-.14
FT	647386	3789	.96	.01	.96	.01	.02	.00	.00	.30	-.12	.30	-.14	-.23
FT	647387	6858	.34	.14	.34	.40	.13	.00	.00	.34	-.10	.34	-.12	-.19
FT	647388	3664	.31	.01	.31	.03	.66	.00	.00	.11	-.14	.11	-.04	-.07
FT	647389	3708	.78	.03	.13	.05	.78	.00	.00	.44	-.22	-.32	-.15	.44
FT	647390	3748	.75	.14	.04	.07	.75	.00	.00	.31	-.11	-.20	-.21	.31
FT	647391	6915	.64	.64	.13	.09	.13	.00	.00	.23	.23	-.08	-.16	-.10
FT	647392	3749	.89	.89	.02	.06	.03	.00	.00	.35	.35	-.19	-.21	-.21
FT	647393	3679	.50	.10	.50	.27	.13	.00	.00	.41	-.20	.41	-.19	-.18
FT	647394	3730	.77	.06	.77	.04	.13	.00	.00	.31	-.15	.31	-.16	-.19
FT	647395	3718	.56	.56	.12	.21	.11	.00	.00	.07	.07	.00	.06	-.20
FT	647396	3679	.49	.14	.28	.49	.09	.00	.00	.30	-.13	-.10	.30	-.21
FT	647397	3705	.36	.36	.10	.42	.11	.00	.00	.31	.31	-.12	-.10	-.20
FT	647398	6818	.82	.82	.05	.06	.07	.00	.00	.43	.43	-.22	-.28	-.20
FT	647399	3711	.76	.76	.07	.06	.11	.00	.00	.43	.43	-.22	-.25	-.23
FT	647400	3776	.86	.02	.10	.02	.86	.00	.00	.30	-.10	-.20	-.20	.30
FT	647401	3703	.73	.03	.73	.11	.13	.00	.00	.41	-.20	.41	-.30	-.16
FT	647402	3734	.48	.28	.07	.16	.48	.00	.00	.28	-.14	-.19	-.07	.28
FT	647403	3708	.89	.02	.89	.03	.06	.00	.00	.30	-.18	.30	-.22	-.12
FT	647404	3691	.94	.94	.01	.03	.01	.00	.00	.32	.32	-.14	-.23	-.16
FT	647405	3700	.89	.04	.04	.04	.89	.00	.00	.21	-.11	-.07	-.17	.21
FT	647406	3585	.58	.06	.16	.20	.58	.00	.00	.41	-.19	-.22	-.19	.41
FT	647407	3657	.94	.01	.02	.94	.02	.00	.00	.32	-.15	-.18	.32	-.21
FT	647408	6872	.83	.03	.05	.09	.83	.00	.00	.45	-.21	-.20	-.32	.45
FT	647409	6921	.95	.02	.02	.95	.01	.00	.00	.29	-.21	-.13	.29	-.14
FT	647410	3739	.54	.01	.41	.04	.54	.00	.00	.24	-.15	-.15	-.15	.24

Grade 5 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	647411	3802	.86	.07	.86	.04	.04	.00	.00	.21	-.04	.21	-.21	-.11
FT	647412	6857	.69	.17	.09	.69	.05	.00	.00	.20	-.07	-.12	.20	-.15
FT	647413	3710	.59	.59	.08	.20	.13	.00	.00	.53	.53	-.14	-.32	-.27
FT	647414	3680	.58	.24	.11	.58	.06	.00	.00	.41	-.23	-.20	.41	-.16
FT	647415	3743	.76	.76	.04	.14	.06	.00	.00	.24	.24	-.12	-.11	-.17
FT	647416	6912	.88	.05	.02	.04	.88	.00	.00	.24	-.12	-.15	-.14	.24
FT	647417	3676	.72	.72	.15	.05	.08	.00	.00	.50	.50	-.21	-.30	-.29
FT	647418	3606	.84	.84	.07	.06	.03	.00	.00	.36	.36	-.19	-.17	-.26
FT	647419	3782	.70	.04	.70	.12	.13	.00	.00	.39	-.23	.39	-.21	-.18
FT	647420	3678	.53	.20	.53	.16	.11	.00	.00	.36	-.17	.36	-.20	-.12
FT	647421	3775	.35	.18	.35	.19	.28	.00	.00	.16	-.08	.16	-.18	.06
FT	647422	3767	.75	.07	.08	.09	.75	.00	.00	.39	-.19	-.20	-.23	.39
FT	647423	3652	.39	.06	.20	.34	.39	.00	.00	.45	-.17	-.24	-.17	.45
FT	647424	3612	.74	.04	.74	.06	.15	.00	.00	.43	-.21	.43	-.22	-.26
FT	647425	3752	.95	.01	.04	.01	.95	.00	.00	.31	-.15	-.22	-.16	.31
FT	647426	6863	.76	.08	.03	.12	.76	.00	.00	.27	-.11	-.11	-.19	.27
FT	647427	3821	.51	.51	.25	.11	.13	.00	.00	.37	.37	-.16	-.19	-.17
FT	647428	3666	.66	.05	.16	.66	.13	.00	.00	.32	-.13	-.19	.32	-.16
FT	647429	3679	.68	.07	.15	.11	.68	.00	.00	.29	-.10	-.17	-.17	.29
FT	647430	3684	.70	.14	.70	.05	.11	.00	.00	.37	-.13	.37	-.23	-.25
FT	647431	6839	.94	.02	.02	.02	.94	.00	.00	.25	-.10	-.15	-.17	.25
FT	647432	3614	.87	.07	.87	.04	.02	.00	.00	.38	-.23	.38	-.23	-.18
FT	647433	6826	.66	.26	.05	.03	.66	.00	.00	.20	-.04	-.16	-.22	.20
FT	647434	3715	.62	.03	.22	.62	.13	.00	.00	.34	-.17	-.13	.34	-.24

Grade 8

Grade 8 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	635003	20816	.58	.28	.06	.58	.08	.00	.00	.33	-.17	-.21	.33	-.13
OP	635004	20816	.74	.08	.13	.06	.74	.00	.00	.42	-.26	-.15	-.28	.42
OP	635005	20816	.44	.44	.17	.20	.18	.00	.00	.38	.38	-.12	-.28	-.07
OP	635007	20816	.58	.12	.58	.12	.18	.00	.00	.37	-.26	.37	-.05	-.21
OP	635008	20816	.53	.24	.06	.53	.17	.00	.00	.24	-.06	-.19	.24	-.12
OP	635009	20816	.44	.09	.03	.44	.45	.00	.00	.34	-.19	-.16	.34	-.18
OP	635011	20816	.63	.20	.12	.63	.06	.00	.00	.38	-.17	-.22	.38	-.19
OP	635014	20816	.42	.10	.37	.11	.42	.00	.00	.34	-.23	-.01	-.29	.34
OP	635019	20816	.56	.11	.56	.18	.14	.00	.00	.45	-.21	.45	-.26	-.16

Grade 8 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	635022	20816	.76	.76	.07	.10	.06	.00	.00	.45	.45	-.25	-.26	-.18
OP	635025	20816	.71	.02	.71	.01	.26	.00	.00	.38	-.17	.38	-.14	-.30
OP	635028	20816	.56	.56	.27	.06	.11	.00	.00	.42	.42	-.20	-.23	-.20
OP	635030	20816	.71	.09	.07	.71	.13	.00	.00	.15	-.05	-.11	.15	-.07
OP	635031	20816	.63	.63	.15	.06	.16	.00	.00	.32	.32	-.14	-.21	-.14
OP	635034	20816	.34	.03	.34	.07	.56	.00	.00	.39	-.20	.39	-.25	-.17
OP	635035	20816	.48	.36	.10	.48	.06	.00	.00	.28	-.08	-.20	.28	-.18
OP	635037	20816	.63	.10	.63	.21	.06	.00	.00	.33	-.07	.33	-.20	-.24
OP	635041	20816	.44	.06	.47	.03	.44	.00	.00	.32	-.18	-.15	-.22	.32
OP	635043	20816	.70	.07	.10	.13	.70	.00	.00	.45	-.13	-.23	-.31	.45
OP	635046	20816	.65	.65	.04	.25	.05	.00	.00	.23	.23	-.17	-.10	-.14
OP	635051	20816	.51	.15	.51	.10	.23	.00	.00	.38	-.18	.38	-.19	-.16
OP	635053	20816	.64	.17	.10	.64	.08	.00	.00	.40	-.25	-.15	.40	-.19
OP	635056	20816	.86	.01	.10	.86	.02	.00	.00	.23	-.19	-.11	.23	-.14
OP	635058	20816	.80	.80	.03	.13	.04	.00	.00	.40	.40	-.19	-.27	-.18
OP	635059	20816	.66	.19	.66	.13	.03	.00	.00	.47	-.29	.47	-.24	-.17
OP	635063	20816	.72	.03	.17	.72	.08	.00	.00	.48	-.21	-.32	.48	-.22
OP	635066	20816	.87	.05	.06	.02	.87	.00	.00	.36	-.28	-.12	-.22	.36
OP	635067	20816	.76	.04	.76	.11	.09	.00	.00	.40	-.18	.40	-.23	-.22
OP	635071	20816	.80	.08	.05	.07	.80	.00	.00	.49	-.23	-.25	-.30	.49
OP	635075	20816	.68	.68	.12	.17	.03	.00	.00	.40	.40	-.10	-.33	-.15
OP	635079	20816	.65	.23	.08	.04	.65	.00	.00	.30	-.13	-.20	-.17	.30
OP	635082	20816	.76	.76	.05	.14	.06	.00	.00	.38	.38	-.24	-.17	-.22
OP	635083	20816	.79	.09	.05	.07	.79	.00	.00	.51	-.21	-.29	-.32	.51
OP	635087	20816	.80	.06	.80	.05	.09	.00	.00	.43	-.25	.43	-.34	-.13
OP	635091	20816	.67	.15	.67	.14	.04	.00	.00	.42	-.26	.42	-.20	-.17
OP	635094	20816	.47	.47	.10	.21	.22	.00	.00	.47	.47	-.22	-.20	-.21
OP	635095	20816	.90	.03	.90	.02	.05	.00	.00	.36	-.19	.36	-.18	-.21
OP	635096	20816	.73	.73	.04	.09	.13	.00	.00	.48	.48	-.23	-.25	-.27
OP	635098	20816	.88	.04	.04	.88	.04	.00	.00	.47	-.26	-.24	.47	-.27
OP	635102	20816	.73	.06	.12	.08	.73	.00	.00	.48	-.27	-.22	-.26	.48
OP	635110	20816	.62	.05	.62	.16	.16	.00	.00	.45	-.17	.45	-.18	-.30
OP	635111	20816	.67	.06	.67	.18	.08	.00	.00	.44	-.14	.44	-.27	-.24
OP	635114	20816	.85	.85	.04	.05	.05	.00	.00	.43	.43	-.26	-.22	-.21
OP	635115	20816	.48	.06	.09	.38	.48	.00	.00	.35	-.17	-.29	-.11	.35
OP	635116	20816	.67	.16	.67	.11	.06	.00	.00	.47	-.22	.47	-.27	-.22
OP	635117	20816	.74	.08	.10	.74	.08	.00	.00	.46	-.19	-.32	.46	-.18
OP	635119	20816	.40	.16	.11	.33	.40	.00	.00	.30	-.14	-.14	-.12	.30
OP	635125	20816	.45	.08	.19	.45	.28	.00	.00	.32	-.15	-.14	.32	-.13
OP	635126	20816	.89	.05	.89	.03	.03	.00	.00	.46	-.31	.46	-.20	-.24

Grade 8 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	635128	20816	.44	.15	.44	.30	.11	.00	.00	.42	-.27	.42	-.06	-.26
OP	635132	20816	.69	.04	.69	.20	.08	.00	.00	.45	-.23	.45	-.30	-.17
OP	635137	20816	.88	.03	.88	.05	.03	.00	.00	.43	-.23	.43	-.28	-.19
OP	635144	20816	.54	.54	.25	.08	.13	.00	.00	.32	.32	-.14	-.26	-.08
OP	635148	20816	.70	.03	.25	.70	.03	.00	.00	.29	-.19	-.17	.29	-.20
OP	635153	20816	.81	.81	.07	.06	.06	.00	.00	.46	.46	-.22	-.26	-.26
OP	635155	20816	.79	.02	.79	.07	.12	.00	.00	.38	-.18	.38	-.34	-.13
OP	635157	20816	.81	.14	.03	.02	.81	.00	.00	.40	-.28	-.20	-.18	.40
OP	635159	20816	.75	.11	.10	.75	.04	.00	.00	.50	-.21	-.37	.50	-.21
OP	635162	20816	.61	.17	.61	.15	.07	.00	.00	.39	-.08	.39	-.35	-.13
OP	635233	20816	.68	.68	.09	.19	.04	.00	.00	.27	.27	-.21	-.10	-.14
FT	647100	6174	.60	.05	.19	.17	.60	.00	.00	.36	-.19	-.11	-.25	.36
FT	647101	3651	.58	.06	.15	.58	.21	.00	.00	.26	-.18	-.12	.26	-.11
FT	647102	3670	.66	.08	.05	.66	.21	.00	.00	.43	-.19	-.15	.43	-.30
FT	647103	3651	.60	.28	.06	.60	.05	.00	.00	.39	-.24	-.23	.39	-.13
FT	647104	6088	.47	.13	.47	.09	.31	.00	.00	.25	-.14	.25	-.23	-.01
FT	647105	3724	.53	.53	.04	.15	.28	.00	.00	.27	.27	-.22	-.14	-.10
FT	647106	3680	.52	.52	.13	.24	.11	.00	.00	.49	.49	-.27	-.23	-.19
FT	647107	6161	.54	.54	.12	.14	.20	.00	.00	.39	.39	-.19	-.22	-.13
FT	647108	3657	.69	.05	.03	.23	.69	.00	.00	.26	-.16	-.16	-.14	.26
FT	647109	3615	.42	.27	.42	.09	.22	.00	.00	.28	-.18	.28	-.12	-.06
FT	647111	3661	.60	.09	.60	.14	.17	.00	.00	.34	-.18	.34	-.19	-.14
FT	647112	3691	.79	.03	.12	.79	.05	.00	.00	.29	-.15	-.13	.29	-.21
FT	647113	3753	.44	.44	.04	.03	.49	.00	.00	.28	.28	-.26	-.23	-.10
FT	647114	3654	.47	.47	.31	.16	.07	.00	.00	.22	.22	-.11	-.09	-.10
FT	647115	3621	.76	.03	.15	.76	.06	.00	.00	.35	-.20	-.24	.35	-.13
FT	647117	3691	.78	.02	.78	.18	.02	.00	.00	.16	-.09	.16	-.10	-.10
FT	647118	3732	.26	.16	.26	.07	.51	.00	.00	.24	-.20	.24	-.18	.02
FT	647119	3598	.40	.15	.10	.40	.36	.00	.00	.34	-.16	-.18	.34	-.12
FT	647120	3594	.53	.25	.10	.12	.53	.00	.00	.35	-.10	-.15	-.27	.35
FT	647121	3706	.25	.25	.03	.04	.68	.00	.00	.30	.30	-.23	-.25	-.09
FT	647122	3746	.44	.38	.44	.03	.14	.00	.00	.33	-.13	.33	-.22	-.16
FT	647123	6169	.57	.21	.16	.57	.06	.00	.00	.33	-.21	-.08	.33	-.20
FT	647124	3664	.51	.13	.51	.14	.22	.00	.00	.30	-.05	.30	-.20	-.16
FT	647128	3567	.60	.60	.20	.11	.10	.00	.00	.31	.31	-.13	-.13	-.19
FT	647129	3669	.95	.01	.03	.95	.02	.00	.00	.21	-.15	-.16	.21	-.04
FT	647130	3634	.53	.26	.14	.53	.07	.00	.00	.18	.08	-.19	.18	-.22
FT	647132	6184	.76	.02	.76	.17	.04	.00	.00	.42	-.20	.42	-.29	-.18
FT	647133	3696	.79	.06	.12	.79	.03	.00	.00	.36	-.29	-.19	.36	-.09
FT	647134	3655	.75	.75	.12	.07	.07	.00	.00	.44	.44	-.27	-.28	-.13

Grade 8 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	647135	3680	.43	.20	.23	.43	.14	.00	.00	.16	-.09	-.05	.16	-.07
FT	647136	6174	.72	.72	.07	.07	.13	.00	.00	.41	.41	-.24	-.27	-.14
FT	647138	3668	.74	.04	.74	.14	.07	.00	.00	.43	-.24	.43	-.27	-.18
FT	647140	3716	.23	.23	.18	.38	.22	.00	.00	.16	.16	-.25	.01	.06
FT	647141	3742	.64	.07	.64	.19	.10	.00	.00	.38	-.28	.38	-.07	-.26
FT	647142	3624	.54	.54	.05	.23	.19	.00	.00	.23	.23	-.13	-.19	-.02
FT	647145	6160	.53	.08	.10	.29	.53	.00	.00	.43	-.18	-.28	-.17	.43
FT	647146	3569	.77	.08	.77	.05	.09	.00	.00	.25	-.06	.25	-.22	-.13
FT	647147	6113	.76	.11	.76	.08	.05	.00	.00	.43	-.21	.43	-.28	-.19
FT	647148	3585	.26	.26	.13	.42	.19	.00	.00	.20	.20	-.35	.17	-.13
FT	647149	6110	.81	.04	.06	.09	.81	.00	.00	.32	-.15	-.22	-.14	.32
FT	647150	3673	.49	.21	.13	.17	.49	.00	.00	.33	-.20	-.12	-.12	.33
FT	647151	3639	.85	.05	.85	.04	.06	.00	.00	.33	-.25	.33	-.17	-.12
FT	647152	3716	.69	.26	.03	.69	.03	.00	.00	.29	-.14	-.21	.29	-.21
FT	647154	3826	.64	.64	.10	.16	.09	.00	.00	.36	.36	-.16	-.14	-.25
FT	647155	3572	.50	.50	.38	.11	.01	.00	.00	.23	.23	-.05	-.22	-.16
FT	647156	6150	.54	.05	.33	.54	.08	.00	.00	.33	-.21	-.15	.33	-.17
FT	647157	3653	.52	.52	.09	.22	.17	.00	.00	.43	.43	-.21	-.24	-.15
FT	647158	3661	.39	.23	.26	.39	.12	.00	.00	.27	-.16	-.09	.27	-.08
FT	647159	3626	.79	.08	.10	.79	.03	.00	.00	.41	-.21	-.26	.41	-.19
FT	647220	3662	.82	.06	.10	.82	.03	.00	.00	.39	-.25	-.22	.39	-.18

Grade 11

Grade 11 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	635172	20835	.60	.09	.20	.12	.60	.00	.00	.41	-.19	-.22	-.18	.41
OP	635180	20835	.58	.18	.11	.13	.58	.00	.00	.46	-.17	-.25	-.23	.46
OP	635181	20835	.61	.23	.61	.14	.02	.00	.00	.54	-.39	.54	-.22	-.17
OP	635185	20835	.84	.03	.07	.84	.05	.00	.00	.35	-.17	-.16	.35	-.22
OP	635187	20835	.66	.66	.09	.16	.08	.00	.00	.33	.33	-.19	-.18	-.13
OP	635192	20835	.57	.24	.06	.13	.57	.00	.00	.53	-.24	-.22	-.31	.53
OP	635197	20835	.68	.13	.68	.09	.09	.00	.00	.45	-.14	.45	-.32	-.23
OP	635200	20835	.62	.08	.19	.11	.62	.00	.00	.49	-.24	-.29	-.18	.49
OP	635209	20835	.55	.02	.55	.31	.12	.00	.00	.17	-.19	.17	-.02	-.14

Grade 11 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	635211	20835	.67	.67	.08	.14	.10	.00	.00	.32	.32	-.11	-.20	-.14
OP	635217	20835	.58	.05	.17	.58	.20	.00	.00	.31	-.15	-.16	.31	-.14
OP	635218	20835	.59	.18	.09	.59	.14	.00	.00	.34	-.10	-.30	.34	-.10
OP	635232	20835	.35	.25	.09	.31	.35	.00	.00	.39	.05	-.23	-.29	.39
OP	635237	20835	.56	.10	.15	.19	.56	.00	.00	.38	-.13	-.13	-.26	.38
OP	635238	20835	.45	.08	.45	.17	.30	.00	.00	.34	-.14	.34	-.20	-.11
OP	635243	20835	.56	.10	.21	.14	.56	.00	.00	.50	-.23	-.20	-.28	.50
OP	635245	20835	.57	.08	.57	.15	.19	.00	.00	.33	-.16	.33	-.24	-.07
OP	635251	20835	.46	.46	.09	.30	.15	.00	.00	.38	.38	-.21	-.22	-.07
OP	635263	20835	.73	.73	.13	.06	.09	.00	.00	.40	.40	-.26	-.19	-.16
OP	635265	20835	.68	.68	.11	.12	.08	.00	.00	.44	.44	-.20	-.21	-.25
OP	635274	20835	.64	.17	.64	.04	.15	.00	.00	.40	-.15	.40	-.23	-.24
OP	635275	20835	.56	.31	.56	.07	.05	.00	.00	.39	-.19	.39	-.24	-.19
OP	635279	20835	.71	.71	.16	.10	.03	.00	.00	.51	.51	-.30	-.28	-.20
OP	635280	20835	.44	.24	.12	.20	.44	.00	.00	.46	-.04	-.27	-.30	.46
OP	635282	20835	.84	.04	.04	.84	.08	.00	.00	.42	-.19	-.23	.42	-.26
OP	635288	20835	.67	.07	.13	.67	.13	.00	.00	.41	-.18	-.31	.41	-.12
OP	635289	20835	.76	.10	.76	.07	.06	.00	.00	.51	-.27	.51	-.31	-.23
OP	635291	20835	.44	.05	.14	.36	.44	.00	.00	.53	-.02	-.29	-.33	.53
OP	635294	20835	.74	.02	.74	.22	.02	.00	.00	.40	-.18	.40	-.30	-.19
OP	635490	20835	.82	.12	.03	.82	.02	.00	.00	.42	-.25	-.26	.42	-.21
OP	635492	20835	.53	.18	.15	.53	.14	.00	.00	.32	-.03	-.28	.32	-.14
OP	635493	20835	.69	.11	.13	.69	.07	.00	.00	.41	-.18	-.26	.41	-.16
OP	635495	20835	.63	.09	.13	.15	.63	.00	.00	.49	-.20	-.26	-.25	.49
OP	635497	20835	.51	.51	.14	.26	.09	.00	.00	.45	.45	-.23	-.23	-.14
OP	635498	20835	.57	.13	.15	.15	.57	.00	.00	.49	-.21	-.23	-.24	.49
OP	635499	20835	.77	.08	.10	.77	.04	.00	.00	.52	-.32	-.26	.52	-.24
OP	635501	20835	.75	.06	.06	.12	.75	.00	.00	.48	-.27	-.31	-.20	.48
OP	635502	20835	.74	.04	.15	.74	.07	.00	.00	.47	-.23	-.30	.47	-.21
OP	635503	20835	.68	.08	.13	.68	.11	.00	.00	.52	-.26	-.32	.52	-.20
OP	635504	20835	.54	.06	.35	.54	.04	.00	.00	.27	-.18	-.10	.27	-.20

Grade 11 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
OP	635516	20835	.67	.18	.67	.03	.12	.00	.00	.24	-.09	.24	-.16	-.14
OP	635520	20835	.57	.04	.57	.12	.26	.00	.00	.38	-.15	.38	-.30	-.12
OP	635525	20835	.40	.53	.05	.40	.02	.00	.00	.40	-.23	-.23	.40	-.17
OP	635528	20835	.66	.09	.66	.19	.05	.00	.00	.46	-.17	.46	-.33	-.15
OP	635532	20835	.81	.05	.09	.81	.05	.00	.00	.47	-.24	-.32	.47	-.18
OP	635535	20835	.75	.16	.75	.03	.06	.00	.00	.39	-.22	.39	-.24	-.20
OP	635540	20835	.41	.13	.23	.23	.41	.00	.00	.39	-.16	-.09	-.22	.39
OP	635544	20835	.70	.09	.07	.70	.13	.00	.00	.49	-.20	-.28	.49	-.26
OP	635552	20835	.76	.06	.76	.13	.05	.00	.00	.45	-.24	.45	-.25	-.23
OP	635555	20835	.76	.04	.13	.76	.06	.00	.00	.44	-.21	-.25	.44	-.25
OP	635557	20835	.59	.09	.20	.59	.13	.00	.00	.40	-.12	-.18	.40	-.26
OP	635558	20835	.60	.06	.19	.60	.16	.00	.00	.48	-.20	-.27	.48	-.22
OP	635565	20835	.60	.60	.20	.08	.12	.00	.00	.53	.53	-.30	-.26	-.21
OP	636026	20835	.69	.69	.09	.17	.05	.00	.00	.59	.59	-.30	-.36	-.21
OP	636030	20835	.47	.47	.27	.18	.09	.00	.00	.36	.36	-.31	-.05	-.09
OP	636034	20835	.74	.09	.11	.74	.06	.00	.00	.52	-.25	-.32	.52	-.23
OP	636040	20835	.49	.49	.11	.14	.26	.00	.00	.33	.33	-.29	-.24	.03
OP	636041	20835	.65	.18	.65	.10	.07	.00	.00	.41	-.20	.41	-.31	-.09
OP	636044	20835	.74	.02	.20	.03	.74	.00	.00	.43	-.19	-.30	-.21	.43
OP	636046	20835	.75	.03	.09	.13	.75	.00	.00	.31	-.11	-.11	-.25	.31
FT	647160	3638	.25	.25	.13	.13	.49	.00	.00	.12	.12	-.25	-.18	.18
FT	647161	3606	.49	.27	.49	.15	.09	.00	.00	.33	-.01	.33	-.31	-.17
FT	647162	6118	.39	.11	.39	.18	.31	.00	.00	.30	-.04	.30	-.27	-.05
FT	647163	3725	.42	.42	.28	.14	.16	.00	.00	.31	.31	-.14	-.13	-.11
FT	647164	6120	.75	.75	.10	.07	.08	.00	.00	.47	.47	-.26	-.25	-.22
FT	647165	3813	.47	.20	.47	.16	.17	.00	.00	.39	-.13	.39	-.31	-.08
FT	647167	3694	.56	.07	.56	.15	.21	.00	.00	.30	-.21	.30	-.18	-.06
FT	647169	3572	.64	.13	.64	.15	.08	.00	.00	.43	-.20	.43	-.27	-.16
FT	647170	3673	.44	.23	.14	.19	.44	.00	.00	.41	-.09	-.26	-.18	.41
FT	647171	3671	.77	.09	.07	.07	.77	.00	.00	.46	-.24	-.28	-.20	.46
FT	647172	3618	.60	.05	.14	.21	.60	.00	.00	.54	-.23	-.32	-.26	.54

Grade 11 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	647173	3608	.38	.10	.38	.23	.29	.00	.00	.21	-.09	.21	-.13	-.03
FT	647175	3573	.16	.20	.45	.20	.16	.00	.00	.19	-.14	.04	-.09	.19
FT	647176	3714	.15	.57	.15	.17	.11	.00	.00	-.08	.24	-.08	-.16	-.09
FT	647177	3688	.43	.14	.16	.26	.43	.00	.00	.35	-.12	-.21	-.11	.35
FT	647178	3749	.33	.12	.17	.33	.38	.00	.00	.09	.06	.08	.09	-.19
FT	647179	3568	.47	.10	.20	.23	.47	.00	.00	.40	-.13	-.11	-.27	.40
FT	647180	6160	.49	.49	.17	.12	.22	.00	.00	.38	.38	-.17	-.24	-.12
FT	647181	3658	.52	.11	.12	.26	.52	.00	.00	.41	-.19	-.24	-.15	.41
FT	647182	3755	.75	.75	.07	.09	.10	.00	.00	.42	.42	-.25	-.30	-.12
FT	647184	3608	.43	.07	.07	.43	.43	.00	.00	.32	-.14	-.24	-.13	.32
FT	647185	3764	.63	.63	.19	.15	.03	.00	.00	.13	.13	-.02	-.09	-.15
FT	647187	6135	.24	.24	.22	.45	.09	.00	.00	.06	.06	.12	-.11	-.05
FT	647189	3634	.26	.24	.26	.22	.27	.00	.00	-.05	.07	-.05	-.01	-.01
FT	647190	3779	.36	.36	.08	.32	.24	.00	.00	.20	.20	-.30	-.15	.13
FT	647191	3682	.47	.47	.27	.14	.12	.00	.00	.25	.25	-.16	-.12	-.05
FT	647192	3630	.63	.63	.08	.12	.17	.00	.00	.48	.48	-.25	-.26	-.22
FT	647193	6203	.38	.38	.30	.20	.12	.00	.00	.26	.26	-.02	-.19	-.12
FT	647194	3637	.89	.04	.03	.04	.89	.00	.00	.43	-.23	-.22	-.27	.43
FT	647195	3683	.31	.31	.38	.20	.11	.00	.00	.08	.08	.09	-.08	-.16
FT	647197	3686	.78	.06	.06	.78	.10	.00	.00	.45	-.15	-.31	.45	-.25
FT	647198	3678	.43	.42	.07	.43	.08	.00	.00	.18	.03	-.24	.18	-.13
FT	647199	3596	.72	.72	.14	.07	.07	.00	.00	.51	.51	-.28	-.31	-.21
FT	647200	6044	.37	.37	.26	.31	.06	.00	.00	.53	.53	-.21	-.31	-.10
FT	647203	3644	.21	.07	.32	.40	.21	.00	.00	.03	-.15	.16	-.10	.03
FT	647204	3658	.68	.06	.68	.09	.17	.00	.00	.12	-.20	.12	-.22	.15
FT	647205	3667	.77	.07	.10	.77	.06	.00	.00	.26	-.18	-.09	.26	-.15
FT	647206	3655	.25	.12	.12	.25	.51	.00	.00	.16	-.12	-.12	.16	.02
FT	647208	6196	.32	.45	.11	.32	.13	.00	.00	.08	.18	-.20	.08	-.19
FT	647209	3529	.22	.21	.22	.26	.32	.00	.00	.00	.11	.00	-.15	.05
FT	647210	6309	.36	.21	.36	.30	.13	.00	.00	.31	-.21	.31	-.08	-.08
FT	647211	3741	.33	.24	.23	.33	.20	.00	.00	.07	.06	-.11	.07	-.02

Grade 11 Science

GENERAL		COUNTS	PROPORTIONS							CORRELATIONS				
Type	Item ID	N	p-value	A	B	C	D	-	*	Total	A	B	C	D
FT	647212	3618	.84	.03	.09	.84	.04	.00	.00	.34	-.24	-.19	.34	-.15
FT	647213	6154	.34	.22	.28	.15	.34	.00	.00	.24	.08	-.23	-.11	.24
FT	647214	3760	.55	.13	.10	.22	.55	.00	.00	.30	-.18	-.14	-.11	.30
FT	647215	3712	.75	.75	.11	.07	.06	.00	.00	.51	.51	-.28	-.31	-.21
FT	647216	3634	.64	.64	.10	.16	.10	.00	.00	.51	.51	-.27	-.21	-.30
FT	647217	3612	.67	.07	.07	.19	.67	.00	.00	.46	-.23	-.23	-.25	.46
FT	647219	3657	.36	.36	.04	.04	.56	.00	.00	-.06	-.06	-.19	-.25	.23
FT	647221	6139	.79	.05	.79	.10	.05	.00	.00	.47	-.24	.47	-.29	-.21

Appendix K: Reading Field Test Differential Item Functioning

***AM=American Indian, AS=Asian, BL=African American/Black, HI= Hispanic, MU=Multiple Ethnicities, WH=White**
200 student minimum for reporting.

Grade 3 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645588	7235	3418	A-	523	A+	1651	A-	110		185		230	A+
FT	645589	7235	3418	A+	523	A+	1651	A+	110		185		230	A-
FT	645590	7235	3418	A-	523	A+	1651	A+	110		185		230	A+
FT	645591	7235	3418	A-	523	A+	1651	A+	110		185		230	A-
FT	645592	7235	3418	A+	523	A+	1651	A-	110		185		230	A-
FT	645593	7235	3418	A-	523	A-	1651	A-	110		185		230	A-
FT	645594	7235	3418	A+	523	A-	1651	A+	110		185		230	A-
FT	645595	7235	3418	A-	523	A-	1651	A-	110		185		230	A-
FT	645596	7235	3418	A+	523	A-	1651	A-	110		185		230	A-
FT	645597	7235	3418	A+	523	A-	1651	A-	110		185		230	A-
FT	645598	3673	1769	A-	226	A+	525	A-	39		80		123	
FT	645602	3673	1769	A-	226	A+	525	A-	39		80		123	
FT	645604	3673	1769	A-	226	A+	525	A-	39		80		123	
FT	645605	3673	1769	A-	226	A-	525	A-	39		80		123	
FT	645606	3673	1769	A+	226	B-	525	A+	39		80		123	
FT	645608	3673	1769	A-	226	A-	525	A-	39		80		123	
FT	645609	3673	1769	A-	226	A-	525	A-	39		80		123	
FT	645610	3673	1769	A-	226	A+	525	A-	39		80		123	
FT	645611	3673	1769	A+	226	A+	525	A-	39		80		123	

Grade 3 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645613	3673	1769	A-	226	A-	525	A-	39		80		123	
FT	645614	3840	1841	A+	244	A-	579	A+	60		68		124	
FT	645615	3840	1841	A+	244	A-	579	A-	60		68		124	
FT	645616	3840	1841	A-	244	A+	579	A-	60		68		124	
FT	645617	3840	1841	A-	244	A-	579	A-	60		68		124	
FT	645618	3840	1841	A+	244	A-	579	A-	60		68		124	
FT	645619	3840	1841	A-	244	A-	579	A-	60		68		124	
FT	645621	3840	1841	A-	244	A-	579	A-	60		68		124	
FT	645622	3840	1841	A+	244	A+	579	A+	60		68		124	
FT	645623	3840	1841	A-	244	A-	579	A+	60		68		124	
FT	645624	3840	1841	A-	244	A-	579	A-	60		68		124	
FT	645625	3719	1856	A+	232	A-	507	A+	60		78		124	
FT	645627	3719	1856	A+	232	A-	507	A-	60		78		124	
FT	645629	3719	1856	A-	232	A+	507	A-	60		78		124	
FT	645632	3719	1856	A-	232	A-	507	A-	60		78		124	
FT	645633	3719	1856	A+	232	A-	507	A+	60		78		124	
FT	645634	3719	1856	A+	232	A-	507	A+	60		78		124	
FT	645635	3719	1856	A+	232	A-	507	A-	60		78		124	
FT	645636	3719	1856	A-	232	A+	507	A-	60		78		124	
FT	645637	3719	1856	A-	232	A-	507	A-	60		78		124	
FT	645638	3719	1856	A-	232	A-	507	C-	60		78		124	
FT	645640	3723	1859	A-	228	A-	577	B-	57		82		125	
FT	645641	3723	1859	A-	228	A-	577	A-	57		82		125	
FT	645642	3723	1859	A-	228	A-	577	A-	57		82		125	
FT	645643	3723	1859	A-	228	A-	577	A-	57		82		125	
FT	645644	3723	1859	A+	228	A+	577	A-	57		82		125	
FT	645645	3723	1859	A-	228	A-	577	A-	57		82		125	

Grade 3 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645646	3723	1859	B-	228	A-	577	A-	57		82		125	
FT	645651	3723	1859	A+	228	A-	577	A+	57		82		125	
FT	645652	3723	1859	A-	228	A-	577	A+	57		82		125	
FT	645655	3723	1859	A-	228	A-	577	A-	57		82		125	

Grade 4 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC =MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645682	3622	1839	A+	216	A-	517	B-	61		72		130	
FT	645683	3622	1839	A-	216	A-	517	A+	61		72		130	
FT	645684	3622	1839	A-	216	A-	517	A-	61		72		130	
FT	645685	3622	1839	A+	216	A+	517	A+	61		72		130	
FT	645686	3622	1839	A+	216	A-	517	A-	61		72		130	
FT	645688	3622	1839	A+	216	A-	517	A+	61		72		130	
FT	645689	3622	1839	A-	216	A-	517	A-	61		72		130	
FT	645690	3622	1839	A+	216	A-	517	A-	61		72		130	
FT	645692	3622	1839	A+	216	A-	517	A-	61		72		130	
FT	645694	3622	1839	A+	216	A+	517	A-	61		72		130	
FT	645696	7298	3471	A+	491	A-	1682	A-	106		176		226	A-
FT	645697	7298	3471	A+	491	A+	1682	A+	106		176		226	A-
FT	645698	7298	3471	A-	491	B-	1682	B-	106		176		226	B-
FT	645699	7298	3471	A-	491	A-	1682	A-	106		176		226	A+
FT	645700	7298	3471	A+	491	A+	1682	A-	106		176		226	A+
FT	645701	7298	3471	A+	491	A-	1682	A+	106		176		226	A+
FT	645703	7298	3471	A-	491	B-	1682	A-	106		176		226	A-

Grade 4 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC =MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645705	7298	3471	A+	491	A-	1682	A+	106		176		226	A-
FT	645706	7298	3471	A+	491	A-	1682	A+	106		176		226	A-
FT	645711	7298	3471	A-	491	A-	1682	A-	106		176		226	A-
FT	645726	3734	1886	A+	234	A-	541	A-	48		68		128	
FT	645729	3734	1886	A+	234	A-	541	A-	48		68		128	
FT	645730	3734	1886	A-	234	B-	541	A-	48		68		128	
FT	645731	3734	1886	A+	234	A-	541	A+	48		68		128	
FT	645732	3734	1886	A+	234	A-	541	A-	48		68		128	
FT	645734	3734	1886	A+	234	A+	541	A-	48		68		128	
FT	645735	3734	1886	A-	234	A-	541	A-	48		68		128	
FT	645736	3734	1886	A-	234	B-	541	A-	48		68		128	
FT	645737	3734	1886	A-	234	A-	541	A-	48		68		128	
FT	645738	3734	1886	A+	234	A-	541	A-	48		68		128	
FT	645792	3663	1809	A-	224	A-	575	A-	46		61		98	
FT	645794	3663	1809	A-	224	A-	575	A+	46		61		98	
FT	645795	3663	1809	A-	224	A-	575	A-	46		61		98	
FT	645796	3663	1809	A+	224	A+	575	A+	46		61		98	
FT	645799	3663	1809	A+	224	A-	575	A+	46		61		98	
FT	645800	3663	1809	A+	224	A+	575	A+	46		61		98	
FT	645801	3663	1809	A+	224	A-	575	A+	46		61		98	
FT	645802	3663	1809	A+	224	A-	575	A-	46		61		98	
FT	645805	3663	1809	A-	224	A-	575	A-	46		61		98	
FT	645806	3663	1809	A+	224	A-	575	A-	46		61		98	
FT	645808	3696	1853	A+	222	A-	547	A+	48		56		121	
FT	645809	3696	1853	A+	222	A+	547	A+	48		56		121	
FT	645810	3696	1853	A+	222	A-	547	A-	48		56		121	
FT	645812	3696	1853	A+	222	A+	547	A+	48		56		121	

Grade 4 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC =MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645813	3696	1853	A+	222	A-	547	A-	48		56		121	
FT	645816	3696	1853	A+	222	A-	547	A-	48		56		121	
FT	645817	3696	1853	B-	222	B-	547	B-	48		56		121	
FT	645818	3696	1853	A+	222	A-	547	A+	48		56		121	
FT	645819	3696	1853	A+	222	A-	547	A+	48		56		121	
FT	645820	3696	1853	A+	222	A-	547	A-	48		56		121	

Grade 5 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC =MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645741	3762	1948	B+	233	A+	541	A+	46		81		107	
FT	645742	3762	1948	A-	233	A-	541	A-	46		81		107	
FT	645744	3762	1948	A+	233	A+	541	A+	46		81		107	
FT	645745	3762	1948	A+	233	A-	541	A+	46		81		107	
FT	645746	3762	1948	A+	233	B-	541	A-	46		81		107	
FT	645747	3762	1948	A+	233	A+	541	A+	46		81		107	
FT	645750	3762	1948	A+	233	B-	541	B-	46		81		107	
FT	645751	3762	1948	A+	233	A-	541	A-	46		81		107	
FT	645752	3762	1948	A+	233	B-	541	A-	46		81		107	
FT	645754	3762	1948	A+	233	A+	541	A+	46		81		107	
FT	645755	3711	1851	A-	225	A-	582	A-	54		68		107	
FT	645756	3711	1851	A+	225	A-	582	A+	54		68		107	
FT	645757	3711	1851	A-	225	A-	582	A-	54		68		107	
FT	645758	3711	1851	A+	225	B-	582	A-	54		68		107	
FT	645760	3711	1851	A+	225	A+	582	A+	54		68		107	
FT	645761	3711	1851	A-	225	A-	582	A-	54		68		107	

Grade 5 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC =MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645762	3711	1851	A+	225	A-	582	A+	54		68		107	
FT	645763	3711	1851	A+	225	A-	582	A+	54		68		107	
FT	645764	3711	1851	A+	225	A-	582	A-	54		68		107	
FT	645767	3711	1851	A+	225	A-	582	A-	54		68		107	
FT	645769	6729	3181	A+	518	A+	1336	A-	121		174		204	A-
FT	645771	6729	3181	A+	518	A+	1336	A-	121		174		204	A-
FT	645772	6729	3181	A+	518	A-	1336	A-	121		174		204	A-
FT	645773	6729	3181	A+	518	A-	1336	A-	121		174		204	A-
FT	645774	6729	3181	A-	518	A-	1336	B-	121		174		204	B-
FT	645775	6729	3181	A-	518	A-	1336	A-	121		174		204	A+
FT	645776	6729	3181	A-	518	A-	1336	A-	121		174		204	A-
FT	645777	6729	3181	A-	518	A+	1336	A-	121		174		204	A-
FT	645778	6729	3181	A+	518	A-	1336	A+	121		174		204	A+
FT	645779	6729	3181	A+	518	A-	1336	A-	121		174		204	A-
FT	645822	3755	1883	A-	248	A-	610	A-	56		61		113	
FT	645823	3755	1883	A-	248	A-	610	A+	56		61		113	
FT	645824	3755	1883	A+	248	A-	610	A+	56		61		113	
FT	645825	3755	1883	A-	248	A-	610	A-	56		61		113	
FT	645826	3755	1883	A+	248	B-	610	A-	56		61		113	
FT	645827	3755	1883	A+	248	B-	610	B-	56		61		113	
FT	645828	3755	1883	A-	248	A-	610	A-	56		61		113	
FT	645829	3755	1883	A-	248	A-	610	A+	56		61		113	
FT	645830	3755	1883	A-	248	A-	610	A-	56		61		113	
FT	645833	3755	1883	A-	248	A-	610	A-	56		61		113	
FT	645837	3718	1756	A+	229	A+	558	A-	67		66		104	
FT	645838	3718	1756	A-	229	A-	558	A-	67		66		104	
FT	645839	3718	1756	A-	229	A-	558	C-	67		66		104	
FT	645840	3718	1756	A-	229	C-	558	A-	67		66		104	

Grade 5 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC =MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645841	3718	1756	A-	229	A-	558	A+	67		66		104	
FT	645842	3718	1756	A-	229	A-	558	A+	67		66		104	
FT	645843	3718	1756	A-	229	A-	558	A-	67		66		104	
FT	645844	3718	1756	A+	229	A+	558	A-	67		66		104	
FT	645847	3718	1756	A-	229	A-	558	A-	67		66		104	
FT	645848	3718	1756	A-	229	B-	558	A-	67		66		104	

Grade 6 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645851	3613	1756	A+	222	A+	580	A+	40		56		111	
FT	645852	3613	1756	A+	222	A-	580	A-	40		56		111	
FT	645853	3613	1756	A-	222	A-	580	A-	40		56		111	
FT	645854	3613	1756	A+	222	A-	580	A-	40		56		111	
FT	645855	3613	1756	A-	222	B-	580	A+	40		56		111	
FT	645856	3613	1756	A-	222	A+	580	A+	40		56		111	
FT	645858	3613	1756	A+	222	A-	580	A-	40		56		111	
FT	645859	3613	1756	A-	222	A-	580	A-	40		56		111	
FT	645860	3613	1756	A+	222	A-	580	A+	40		56		111	
FT	645862	3613	1756	A+	222	A-	580	A-	40		56		111	
FT	645864	3517	1783	A+	217	A+	520	A-	41		63		116	
FT	645865	3517	1783	A+	217	A+	520	A+	41		63		116	
FT	645866	3517	1783	A+	217	A-	520	B+	41		63		116	
FT	645868	3517	1783	A+	217	A+	520	A-	41		63		116	
FT	645870	3517	1783	A-	217	A-	520	A-	41		63		116	
FT	645871	3517	1783	A-	217	A+	520	A+	41		63		116	

Grade 6 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645872	3517	1783	A+	217	B-	520	A-	41		63		116	
FT	645873	3517	1783	A+	217	A-	520	A+	41		63		116	
FT	645878	3517	1783	A+	217	B-	520	B-	41		63		116	
FT	645880	3517	1783	A-	217	A-	520	A-	41		63		116	
FT	645881	6941	3264	A+	523	A-	1282	A-	112		143		215	A-
FT	645885	6941	3264	A+	523	A+	1282	A+	112		143		215	A+
FT	645886	6941	3264	A+	523	A-	1282	A-	112		143		215	A-
FT	645887	6941	3264	A-	523	A-	1282	A-	112		143		215	A-
FT	645888	6941	3264	A-	523	A-	1282	A-	112		143		215	A-
FT	645889	6941	3264	A-	523	A-	1282	A-	112		143		215	A-
FT	645890	6941	3264	A+	523	A-	1282	A-	112		143		215	B-
FT	645891	6941	3264	A+	523	A+	1282	A+	112		143		215	A+
FT	645894	6941	3264	A+	523	A-	1282	A+	112		143		215	A+
FT	645895	6941	3264	A+	523	A-	1282	A+	112		143		215	A-
FT	645898	3695	1815	A+	231	A+	592	A-	48		71		119	
FT	645899	3695	1815	B-	231	C-	592	B-	48		71		119	
FT	645900	3695	1815	A-	231	A-	592	A-	48		71		119	
FT	645901	3695	1815	A+	231	A+	592	A+	48		71		119	
FT	645902	3695	1815	A-	231	B-	592	A-	48		71		119	
FT	645904	3695	1815	A-	231	B-	592	A-	48		71		119	
FT	645905	3695	1815	A-	231	A-	592	A+	48		71		119	
FT	645906	3695	1815	A-	231	A+	592	A-	48		71		119	
FT	645908	3695	1815	A-	231	A+	592	A-	48		71		119	
FT	645910	3695	1815	A+	231	B-	592	A-	48		71		119	
FT	646001	3669	1818	B-	243	A+	559	A+	64		66		98	
FT	646002	3669	1818	A+	243	A+	559	A+	64		66		98	
FT	646003	3669	1818	C-	243	B-	559	B-	64		66		98	
FT	646004	3669	1818	A-	243	A-	559	A-	64		66		98	

Grade 6 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646006	3669	1818	A-	243	A-	559	A+	64		66		98	
FT	646007	3669	1818	A+	243	A-	559	A-	64		66		98	
FT	646008	3669	1818	A-	243	A-	559	A-	64		66		98	
FT	646010	3669	1818	A+	243	A+	559	A-	64		66		98	
FT	646012	3669	1818	A+	243	A-	559	A+	64		66		98	
FT	646013	3669	1818	A-	243	C-	559	B-	64		66		98	

Grade 7 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645918	3627	1786	A-	248	A-	572	A+	53		71		103	
FT	645919	3627	1786	A+	248	A+	572	A-	53		71		103	
FT	645921	3627	1786	A+	248	A-	572	A-	53		71		103	
FT	645922	3627	1786	A+	248	A-	572	A+	53		71		103	
FT	645923	3627	1786	A-	248	A-	572	A-	53		71		103	
FT	645924	3627	1786	A+	248	B-	572	A-	53		71		103	
FT	645925	3627	1786	A+	248	A+	572	A+	53		71		103	
FT	645926	3627	1786	A+	248	A-	572	A+	53		71		103	
FT	645927	3627	1786	A+	248	A-	572	A+	53		71		103	
FT	645928	3627	1786	A-	248	A-	572	A-	53		71		103	
FT	645929	3569	1748	A+	200	A-	557	A+	49		61		117	
FT	645931	3569	1748	A+	200	B-	557	B-	49		61		117	
FT	645932	3569	1748	A-	200	A-	557	A-	49		61		117	
FT	645933	3569	1748	A-	200	A-	557	B-	49		61		117	
FT	645934	3569	1748	A+	200	A+	557	A+	49		61		117	
FT	645936	3569	1748	A+	200	A+	557	A+	49		61		117	

Grade 7 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645937	3569	1748	A+	200	A-	557	A-	49		61		117	
FT	645938	3569	1748	A+	200	A-	557	A+	49		61		117	
FT	645940	3569	1748	A+	200	A+	557	A-	49		61		117	
FT	645941	3569	1748	A+	200	A+	557	A-	49		61		117	
FT	645957	3728	1859	C+	246	A-	539	A-	48		87		109	
FT	645958	3728	1859	A-	246	B-	539	A-	48		87		109	
FT	645959	3728	1859	A+	246	A-	539	A-	48		87		109	
FT	645961	3728	1859	C-	246	A-	539	B-	48		87		109	
FT	645962	3728	1859	A+	246	A+	539	A-	48		87		109	
FT	645964	3728	1859	A+	246	A-	539	A+	48		87		109	
FT	645965	3728	1859	A+	246	A-	539	A-	48		87		109	
FT	645967	3728	1859	B+	246	A-	539	A-	48		87		109	
FT	645969	3728	1859	A-	246	A-	539	A-	48		87		109	
FT	645970	3728	1859	A+	246	A-	539	A-	48		87		109	
FT	646028	6495	3091	A+	389	A-	1098	A-	102		155		191	
FT	646029	6495	3091	B-	389	A-	1098	A+	102		155		191	
FT	646030	6495	3091	B-	389	A-	1098	A-	102		155		191	
FT	646031	6495	3091	A-	389	A+	1098	A+	102		155		191	
FT	646032	6495	3091	A+	389	A-	1098	A+	102		155		191	
FT	646033	6495	3091	A+	389	A-	1098	A-	102		155		191	
FT	646034	6495	3091	A+	389	B-	1098	A-	102		155		191	
FT	646035	6495	3091	A+	389	A-	1098	A-	102		155		191	
FT	646036	6495	3091	A+	389	A-	1098	A+	102		155		191	
FT	646037	6495	3091	A+	389	A-	1098	A+	102		155		191	
FT	646038	3629	1779	A-	225	A-	570	A+	62		61		122	
FT	646040	3629	1779	A+	225	A+	570	A+	62		61		122	
FT	646041	3629	1779	A+	225	A-	570	A-	62		61		122	
FT	646042	3629	1779	A+	225	A+	570	A-	62		61		122	

Grade 7 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646043	3629	1779	A-	225	A+	570	A+	62		61		122	
FT	646044	3629	1779	A-	225	A-	570	A+	62		61		122	
FT	646045	3629	1779	A+	225	A-	570	A+	62		61		122	
FT	646047	3629	1779	A-	225	A+	570	A+	62		61		122	
FT	646050	3629	1779	A+	225	A-	570	A-	62		61		122	
FT	646051	3629	1779	A+	225	A+	570	A-	62		61		122	

Grade 8 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	645972	3521	1715	C-	256	A-	494	B-	50		69		82	
FT	645973	3521	1715	A-	256	A-	494	A-	50		69		82	
FT	645975	3521	1715	A-	256	A+	494	A+	50		69		82	
FT	645976	3521	1715	A-	256	A-	494	A-	50		69		82	
FT	645977	3521	1715	A-	256	A-	494	B-	50		69		82	
FT	645980	3521	1715	A+	256	A+	494	A-	50		69		82	
FT	645981	3521	1715	A-	256	A-	494	A+	50		69		82	
FT	645982	3521	1715	A+	256	A+	494	A+	50		69		82	
FT	645984	3521	1715	A-	256	B-	494	A-	50		69		82	
FT	645985	3521	1715	A-	256	A-	494	A-	50		69		82	
FT	646053	3525	1788	A-	245	A+	545	A+	60		62		97	
FT	646055	3525	1788	A+	245	A+	545	A-	60		62		97	
FT	646056	3525	1788	B+	245	A+	545	A+	60		62		97	
FT	646057	3525	1788	B-	245	A-	545	A-	60		62		97	
FT	646058	3525	1788	A-	245	A-	545	A-	60		62		97	

Grade 8 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646059	3525	1788	A+	245	A-	545	A-	60		62		97	
FT	646062	3525	1788	A+	245	A-	545	A-	60		62		97	
FT	646063	3525	1788	A-	245	A+	545	A+	60		62		97	
FT	646064	3525	1788	A+	245	B-	545	A-	60		62		97	
FT	646065	3525	1788	A-	245	A+	545	A-	60		62		97	
FT	646066	3663	1801	A+	212	A-	569	A-	41		48		104	
FT	646067	3663	1801	A+	212	A+	569	A-	41		48		104	
FT	646069	3663	1801	A+	212	A-	569	A+	41		48		104	
FT	646071	3663	1801	A-	212	B-	569	B-	41		48		104	
FT	646072	3663	1801	A+	212	A+	569	A+	41		48		104	
FT	646073	3663	1801	A+	212	A+	569	A+	41		48		104	
FT	646074	3663	1801	A+	212	A-	569	A+	41		48		104	
FT	646075	3663	1801	A-	212	A-	569	A-	41		48		104	
FT	646076	3663	1801	A+	212	A+	569	A-	41		48		104	
FT	646077	3663	1801	A-	212	A-	569	A-	41		48		104	
FT	646079	3551	1736	A+	221	A+	501	A+	38		66		98	
FT	646080	3551	1736	A+	221	A-	501	A-	38		66		98	
FT	646082	3551	1736	A+	221	B-	501	A-	38		66		98	
FT	646084	3551	1736	A+	221	A-	501	A+	38		66		98	
FT	646085	3551	1736	A-	221	A-	501	A-	38		66		98	
FT	646086	3551	1736	A+	221	A-	501	A+	38		66		98	
FT	646087	3551	1736	A+	221	A-	501	A+	38		66		98	
FT	646089	3551	1736	A-	221	A-	501	A+	38		66		98	
FT	646090	3551	1736	A-	221	A-	501	A+	38		66		98	
FT	646092	3551	1736	A+	221	B-	501	A+	38		66		98	
FT	646094	6556	3027	A+	385	A+	1068	A+	79		137		183	
FT	646095	6556	3027	A-	385	A-	1068	A-	79		137		183	

Grade 8 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646096	6556	3027	A+	385	A-	1068	A+	79		137		183	
FT	646097	6556	3027	A-	385	A-	1068	A-	79		137		183	
FT	646099	6556	3027	A-	385	B-	1068	B-	79		137		183	
FT	646100	6556	3027	A-	385	A-	1068	A+	79		137		183	
FT	646101	6556	3027	A-	385	A-	1068	A+	79		137		183	
FT	646102	6556	3027	A+	385	A-	1068	A+	79		137		183	
FT	646103	6556	3027	A+	385	A-	1068	A-	79		137		183	
FT	646104	6556	3027	A-	385	A+	1068	A+	79		137		183	

Grade 11 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646157	3805	1821	B+	244	A-	477	A+	49		63		127	
FT	646158	3805	1821	A+	244	A-	477	A-	49		63		127	
FT	646160	3805	1821	A+	244	A+	477	A-	49		63		127	
FT	646162	3805	1821	A-	244	A-	477	A-	49		63		127	
FT	646163	3805	1821	A+	244	A-	477	B-	49		63		127	
FT	646164	3805	1821	A+	244	A-	477	A-	49		63		127	
FT	646165	3805	1821	A+	244	A+	477	A+	49		63		127	
FT	646167	3805	1821	A+	244	A+	477	A-	49		63		127	
FT	646169	3805	1821	A+	244	A-	477	A-	49		63		127	
FT	646170	3805	1821	A+	244	A+	477	A+	49		63		127	
FT	646172	5695	2778	A+	375	A+	955	A-	71		120		127	
FT	646173	5695	2778	A-	375	A-	955	A-	71		120		127	

Grade 11 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646174	5695	2778	A+	375	A-	955	A-	71		120		127	
FT	646175	5695	2778	A+	375	A-	955	A+	71		120		127	
FT	646176	5695	2778	A+	375	A-	955	A-	71		120		127	
FT	646179	5695	2778	A-	375	A-	955	A-	71		120		127	
FT	646180	5695	2778	A-	375	A-	955	A+	71		120		127	
FT	646181	5695	2778	A-	375	A+	955	C+	71		120		127	
FT	646182	5695	2778	A-	375	A+	955	A+	71		120		127	
FT	646183	5695	2778	B-	375	A-	955	A-	71		120		127	
FT	646185	3817	1878	B-	232	B-	476	A-	31		90		105	
FT	646187	3817	1878	A+	232	A-	476	A-	31		90		105	
FT	646188	3817	1878	A-	232	B-	476	B-	31		90		105	
FT	646189	3817	1878	A+	232	A-	476	A-	31		90		105	
FT	646190	3817	1878	A-	232	A-	476	A-	31		90		105	
FT	646191	3817	1878	A+	232	A+	476	A-	31		90		105	
FT	646192	3817	1878	A+	232	B-	476	A-	31		90		105	
FT	646193	3817	1878	A-	232	A-	476	A-	31		90		105	
FT	646194	3817	1878	A+	232	B-	476	A-	31		90		105	
FT	646195	3817	1878	A-	232	A-	476	A-	31		90		105	
FT	646197	3876	1871	A-	240	A+	445	A-	50		92		112	
FT	646198	3876	1871	A+	240	B-	445	A-	50		92		112	
FT	646199	3876	1871	A-	240	B+	445	A+	50		92		112	
FT	646201	3876	1871	A+	240	A-	445	A+	50		92		112	
FT	646203	3876	1871	A-	240	A-	445	A+	50		92		112	
FT	646208	3876	1871	A-	240	A-	445	A-	50		92		112	
FT	646211	3876	1871	A+	240	B-	445	A-	50		92		112	
FT	646213	3876	1871	A+	240	A-	445	A-	50		92		112	
FT	646214	3876	1871	A-	240	A-	445	A-	50		92		112	

Grade 11 Reading			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646215	3876	1871	A-	240	B-	445	C-	50		92		112	
FT	646217	3760	1859	B+	245	A-	484	A+	38		81		89	
FT	646218	3760	1859	A+	245	A+	484	A+	38		81		89	
FT	646220	3760	1859	A+	245	A+	484	A+	38		81		89	
FT	646221	3760	1859	A+	245	A-	484	A-	38		81		89	
FT	646222	3760	1859	A+	245	A-	484	A-	38		81		89	
FT	646224	3760	1859	A+	245	A-	484	A-	38		81		89	
FT	646225	3760	1859	A+	245	A-	484	A-	38		81		89	
FT	646228	3760	1859	A+	245	A-	484	A-	38		81		89	
FT	646229	3760	1859	A+	245	A-	484	A-	38		81		89	
FT	646230	3760	1859	A-	245	A-	484	A-	38		81		89	

Appendix L: Math Field Test Differential Item Functioning

***M=Male, F=Female, AM=American Indian, AS=Asian, BL=African American/Black, HI= Hispanic, MU=Multiple Ethnicities, WH=White**
200 student minimum for reporting

Grade 3 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646507	2982	1458	A-	246	A-	440	A-	47		54		78	
FT	646508	2881	1408	A-	207	A-	418	A+	43		47		80	
FT	646509	2937	1428	A-	176		433	A-	44		63		79	
FT	646510	2990	1481	A+	183		482	A-	40		65		84	
FT	646511	2954	1459	A+	201	A-	447	A-	42		54		93	
FT	646512	2980	1423	A-	198		461	A-	44		52		82	
FT	646513	2952	1477	A-	224	A-	458	A-	57		51		69	
FT	646514	10485	5026	A-	674	B-	2074	A-	149		306	A-	394	A+
FT	646515	2951	1393	A+	190		475	A-	44		38		81	
FT	646516	2953	1477	A-	219	B-	434	A-	44		45		94	
FT	646518	2963	1436	A-	173		427	B-	51		51		84	
FT	646519	10355	4938	A-	670	A-	2046	A-	134		299	A-	373	A-
FT	646522	2947	1395	A-	195		434	A+	42		50		86	
FT	646523	2862	1402	A-	171		452	A-	53		52		90	
FT	646524	3018	1439	A-	208	A+	466	A-	47		47		87	
FT	646525	10425	5054	B+	672	A+	2095	A+	125		306	A+	400	A+
FT	646526	2973	1481	B+	223	A-	455	A+	50		45		90	
FT	646527	2968	1441	A+	208	A-	447	A+	52		56		92	
FT	646528	2852	1400	A+	184		467	A+	44		48		70	
FT	646529	2875	1411	A-	186		424	A+	39		47		74	
FT	646530	2999	1487	A+	187		472	A+	48		45		87	
FT	646531	10439	5025	A+	673	A+	2096	A+	151		289	A+	395	A+
FT	646532	2875	1410	A+	187		414	A+	42		64		83	
FT	646533	10404	5011	A+	668	A-	2072	A+	146		293	A-	383	A+

Grade 3 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646534	2929	1425	A-	213	A+	453	A+	35		44		82	
FT	646536	10501	5062	A+	673	A-	2079	A+	139		320	A+	387	A+
FT	646537	2884	1415	A+	215	A-	410	A-	44		43		91	
FT	646538	3001	1439	A-	196		426	A+	47		46		84	
FT	646541	2948	1478	A+	205	C-	430	C-	59		57		90	
FT	646542	3031	1491	A-	189		461	A+	44		53		97	
FT	646543	2941	1414	A-	180		475	B-	55		42		91	
FT	646545	2940	1412	A-	164		464	A-	44		44		85	
FT	646546	2987	1449	A-	190		434	A-	47		59		79	
FT	646547	2959	1423	A-	205	B-	503	A-	48		50		80	
FT	646549	3011	1493	A-	186		451	A-	48		54		84	
FT	646550	2840	1396	A-	208	A+	431	A-	39		51		73	
FT	646551	2998	1465	B+	197		449	A+	44		49		92	
FT	646552	2967	1474	A+	194		473	A+	47		60		94	
FT	646553	2940	1406	A+	196		438	A-	39		51		93	
FT	646554	2970	1476	A+	199		425	A+	46		58		74	
FT	646555	2846	1331	A+	182		430	B+	49		55		82	
FT	646556	10407	4960	A+	643	A+	2047	A+	130		302	B+	392	A+
FT	646557	2942	1463	A-	195		462	A-	58		51		81	
FT	646558	10375	4974	A+	648	A-	2043	A-	141		310	A+	397	A-
FT	646559	2941	1411	A+	195		464	A+	43		63		84	
FT	646560	2944	1446	B+	200	A+	433	C+	50		54		85	
FT	646561	2958	1456	B+	203	A+	405	A+	46		59		85	
FT	646562	10387	4965	A+	668	A-	2068	A+	145		291	A+	390	A-
FT	646565	10464	5006	A+	677	A-	2058	A-	145		296	C-	388	A-
FT	646566	3029	1495	A+	196		479	A-	40		71		92	

Grade 4 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646567	3020	1534	A+	199		480	A-	53		53		61	
FT	646568	2927	1458	A+	179		441	A-	48		33		85	
FT	646569	2935	1470	A-	191		455	A-	44		59		78	
FT	646570	2937	1450	B-	168		448	A-	53		48		91	
FT	646571	2941	1460	A-	188		459	A-	51		54		74	
FT	646572	2932	1445	A-	192		463	A-	52		47		67	
FT	646573	2974	1470	A+	163		470	A-	52		48		79	
FT	646574	3013	1538	A+	173		469	A-	54		55		98	
FT	646575	2965	1473	A+	192		428	A-	39		51		85	
FT	646576	2950	1457	B-	187		443	B-	44		48		79	
FT	646577	2987	1454	A+	198		453	A-	49		39		76	
FT	646578	2927	1464	A-	174		419	A-	44		42		101	
FT	646580	2975	1470	A+	183		451	B-	52		51		78	
FT	646581	2908	1442	B+	173		446	A+	41		52		73	
FT	646582	2905	1461	A+	200	A-	449	A-	47		47		69	
FT	646583	2984	1512	A+	181		485	A+	59		42		83	
FT	646584	2908	1466	A-	164		473	A-	48		41		75	
FT	646585	2986	1518	A-	207	A-	484	A-	50		53		92	
FT	646586	2871	1440	A-	179		483	A+	54		36		94	
FT	646588	2955	1512	A+	174		473	B-	38		54		76	
FT	646589	2968	1480	A-	194		450		40		47		79	
FT	646590	10255	4997	A+	675	A-	2048	A-	122		262	A-	383	A-
FT	646591	2960	1523	A+	188		442	A+	40		53		80	
FT	646592	2918	1423	A+	162		464	A-	42		64		81	
FT	646593	2949	1475	A+	181		432	B+	44		46		83	
FT	646594	2872	1449	A+	162		451	A+	39		59		75	
FT	646597	2909	1441	A+	176		451	A-	42		56		76	
FT	646598	10326	4989	A+	672	A+	2044	A+	124		260	A-	392	A+

Grade 4 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646599	2899	1471	A-	193		457	A-	56		38		76	
FT	646600	10304	5012	A-	670	A-	2040	A-	112		255	A+	385	A-
FT	646601	2948	1454	A-	209	B-	439	A-	44		45		71	
FT	646602	2825	1423	A-	167		464	A-	50		44		77	
FT	646603	10253	4959	A-	659	A-	2040	A-	118		251	A-	392	A-
FT	646604	2903	1469	A-	184		455	A-	44		48		83	
FT	646605	10327	4975	A-	664	B-	2043	A-	125		248	A-	388	A-
FT	646606	2966	1576	A-	186		480	A-	47		42		71	
FT	646607	10317	5029	A-	670	B-	2076	A-	116		258	A-	371	A+
FT	646609	2901	1460	A+	186		463	A-	45		43		79	
FT	646610	2902	1460	A-	171		438	A-	45		54		82	
FT	646793	10336	5020	A+	662	A-	2040	A-	127		260	C-	382	A-
FT	646796	10291	4962	A+	648	A+	2095	B+	126		254	A-	385	A+
FT	646797	2902	1443	A+	182		490	A-	47		48		96	
FT	646798	3026	1490	A+	173		480	A-	50		53		75	
FT	646799	2906	1420	A+	193		457	A+	46		37		87	
FT	646800	10220	4954	A-	665	A+	2070	A+	123		260	B+	372	A+
FT	646801	2925	1432	A+	186		442	A+	54		45		81	
FT	646802	2917	1420	A+	161		471	A+	45		44		78	
FT	646803	2973	1483	A+	186		460	A-	49		56		68	
FT	646805	2824	1408	A+	168		422	A-	38		59		68	
FT	646806	10278	5014	A+	662	A-	2069	A+	118		258	A-	390	A+

Grade 5 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646611	2878	1396	A-	182		466	A-	66		47		63	
FT	646612	9993	4862	A+	654	A+	1825	A+	149		270	A-	343	A+
FT	646613	10055	4860	A-	660	A-	1824	A-	144		275	A-	351	A-
FT	646615	2902	1473	A+	190		435	A+	50		55		72	
FT	646616	10034	4837	A+	658	A+	1812	A-	140		273	A-	349	A-
FT	646617	2872	1469	A-	183		462	A-	45		41		76	
FT	646618	2919	1449	A-	190		495	A+	46		55		64	
FT	646620	10032	4863	A+	659	A+	1785	A-	151		272	A+	353	A-
FT	646621	10085	4899	A+	668	A+	1806	A+	147		274	A+	348	A+
FT	646622	10048	4817	A-	660	A+	1812	A+	136		278	A+	347	A+
FT	646623	3035	1518	A+	239	A+	442	A-	42		45		75	
FT	646624	2977	1498	A+	198		469	A+	46		55		67	
FT	646625	10041	4876	A+	661	A-	1806	A+	140		261	A-	350	A-
FT	646626	2885	1462	A+	196		448	A-	57		49		72	
FT	646627	2945	1461	A-	196		476	A-	51		43		65	
FT	646628	2806	1392	A-	175		435	A-	54		44		55	
FT	646629	2909	1456	A+	198		478	A-	42		49		78	
FT	646630	2952	1440	A+	200	A+	488	A+	48		48		71	
FT	646631	2882	1429	A+	187		507	A-	42		51		76	
FT	646632	2858	1463	A+	224	A-	426	A-	46		51		85	
FT	646633	2898	1437	A+	211	A-	454	A-	54		48		73	
FT	646634	2902	1403	A+	194		472	A-	49		46		73	
FT	646635	2877	1406	A-	212	A-	437	A-	58		46		70	
FT	646636	10029	4819	A+	675	A-	1785	A-	150		268	B+	346	A+
FT	646638	2951	1437	A-	205	A-	436	A+	58		46		82	
FT	646640	2853	1445	A+	183		444	A+	50		37		85	
FT	646641	2909	1435	A+	190		482	A+	45		48		73	
FT	646643	2860	1425	A-	208	A-	449	A-	57		62		56	

Grade 5 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646645	2835	1432	A-	189		452	A-	57		52		65	
FT	646646	2923	1428	A+	206	A-	439	A+	47		46		56	
FT	646647	2920	1470	A+	200	B-	442	A-	43		51		70	
FT	646648	2888	1409	A-	190		448	A-	53		50		65	
FT	646649	2844	1418	A-	192		466	A+	50		54		66	
FT	646650	2969	1504	A+	208	A+	468	A+	49		55		78	
FT	646651	2968	1430	A+	165		458	B+	41		57		77	
FT	646652	2848	1401	A+	205	A-	417	A+	50		46		63	
FT	646653	10023	4860	A+	648	A+	1809	A+	143		280	B+	347	A+
FT	646654	3000	1492	A-	223	A-	483	A-	39		52		79	
FT	646655	2844	1385	B-	183		445	B-	53		45		83	
FT	646656	2894	1450	A+	169		479	A-	59		47		73	
FT	646657	2949	1432	B-	218	A+	478	A-	50		58		75	
FT	646658	3049	1540	A+	191		530	A-	49		41		87	
FT	646661	2954	1473	B+	197		475	A+	49		54		64	
FT	646662	2884	1442	B+	197		460	A+	53		57		80	
FT	646664	2911	1411	A-	200	A-	451	A-	51		57		79	
FT	646665	10062	4857	A+	663	A-	1798	A-	155		260	B-	346	A-
FT	646666	2957	1441	B+	213	B-	444	A-	54		47		66	
FT	646667	2923	1437	A-	213	A-	439	A-	54		64		79	
FT	646668	2922	1384	A+	202	A-	480	A-	49		61		67	
FT	646669	2926	1427	A-	197		443	A-	39		49		67	

Grade 6 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646670	2674	1330	C-	182		421	B-	35		41		69	
FT	646672	2802	1360	B-	211	A-	407	A-	54		38		70	
FT	646673	2652	1280	A+	189		431	A+	42		44		50	
FT	646674	2784	1358	A-	195		445	B+	49		56		74	
FT	646675	2723	1353	A+	183		424	A+	42		39		67	
FT	646676	10281	4955	A+	670	A+	1715	A+	125		223	A-	366	A-
FT	646677	2650	1269	A+	190		435	A+	44		52		79	
FT	646678	10160	4953	A+	698	A+	1656	A+	115		222	A+	365	A-
FT	646679	2719	1323	A+	175		450	A-	47		44		73	
FT	646680	2884	1423	A+	192		477	A-	37		48		82	
FT	646681	2747	1318	A+	179		445	A+	54		52		77	
FT	646682	2785	1370	A+	167		481	A+	51		49		70	
FT	646683	2606	1251	A-	157		448	A-	46		47		62	
FT	646684	10107	4903	A+	686	A+	1665	A+	128		225	B+	363	A-
FT	646685	2890	1430	B-	196		496	B-	43		41		85	
FT	646687	2797	1351	A-	167		490	A+	36		43		78	
FT	646688	2728	1327	A-	165		452	A-	47		44		73	
FT	646689	2817	1420	A+	206	A+	459	A+	46		44		83	
FT	646693	10182	4956	A-	689	A-	1704	B-	120		224	A-	350	A-
FT	646694	10065	4836	A-	680	A-	1688	A+	117		228	A-	345	A-
FT	646695	2803	1344	A+	182		433	A-	40		53		65	
FT	646696	2685	1324	A+	177		427	A+	38		52		81	
FT	646697	2756	1366	A+	164		474	A-	41		45		74	
FT	646699	2694	1306	A-	176		459	A-	51		53		82	
FT	646700	2759	1368	A+	173		474	B-	49		45		72	
FT	646701	10219	4958	A+	689	A+	1703	A-	130		227	A-	363	A-
FT	646702	2826	1376	A-	199		465	A-	36		64		76	
FT	646703	2723	1282	A-	181		457	B-	34		55		65	

Grade 6 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646704	2715	1340	A+	167		466	A+	48		52		79	
FT	646706	2656	1292	A+	166		435	A+	50		51		73	
FT	646707	10087	4943	A-	670	A-	1704	A-	122		214	A+	348	A-
FT	646709	2763	1365	A+	196		454	B-	54		49		63	
FT	646711	2691	1332	A-	172		463	A-	43		35		61	
FT	646712	2823	1395	A+	186		478	A-	41		41		82	
FT	646713	2693	1297	B-	189		430	A-	30		52		77	
FT	646714	2814	1408	A-	183		478	A-	52		45		80	
FT	646716	2702	1299	A+	190		459	A-	34		34		76	
FT	646717	2693	1314	A-	181		425	A-	36		46		77	
FT	646718	10218	4913	A+	688	A+	1693	A+	128		224	A+	366	A+
FT	646719	2674	1319	A-	185		444	C-	47		36		64	
FT	646720	2820	1402	A+	171		462	B-	52		48		67	
FT	646721	2766	1358	A-	199		465	A-	43		45		76	
FT	646722	2766	1375	A+	199		467	A+	47		42		74	
FT	646723	10215	4881	A+	704	A+	1689	A+	121		239	A+	360	A+
FT	646724	2747	1367	B+	198		426	A+	43		50		84	
FT	646726	2854	1370	A+	179		456	A-	43		51		70	
FT	646727	2697	1318	A-	174		456	A-	37		37		66	
FT	646728	2807	1367	A+	166		455	A-	43		53		80	
FT	646729	10063	4873	A+	665	A+	1678	A-	123		232	B+	349	A+
FT	646730	2813	1402	A+	197		478	A-	50		44		80	
FT	648279	2715	1340	A+	177		433	A-	46		52		69	

Grade 7 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646868	9404	4588	A-	513	A+	1407	A-	125		247	A-	327	A-
FT	646870	2951	1429	B-	196		472	A-	54		58		83	
FT	646871	2827	1380	A-	188		464	A-	39		42		80	
FT	646872	2856	1351	A-	207	A-	485	A-	41		50		93	
FT	646873	2926	1414	A-	203	A-	499	A+	51		54		82	
FT	646874	9299	4538	A+	519	A-	1391	A-	139		232	A+	328	A-
FT	646875	2910	1422	A+	197		483	A+	56		49		70	
FT	646876	2920	1411	A-	205	A-	492	A-	53		57		73	
FT	646877	2882	1440	A+	178		459	A-	40		44		80	
FT	646878	2925	1438	A+	202	A-	493	A-	49		52		81	
FT	646879	9337	4603	A+	514	A+	1423	A+	137		245	A+	319	A-
FT	646881	2882	1399	A-	213	A-	462	A-	47		51		77	
FT	646883	2930	1415	A-	191		472	A-	40		68		75	
FT	646884	2811	1369	C-	192		467	A-	45		47		54	
FT	646885	2955	1438	A+	203	A-	486	A+	47		57		85	
FT	646887	9444	4626	A+	549	A-	1394	A-	134		230	A-	327	A-
FT	646889	2943	1460	A+	181		504	A+	42		63		83	
FT	646890	2786	1334	A-	175		450	B-	37		44		75	
FT	646891	2929	1420	A-	200	A-	504	A-	41		48		85	
FT	646892	9328	4555	A-	504	A-	1396	A-	134		236	A-	334	A+
FT	646893	2900	1362	A-	221	A+	498	A-	54		39		82	
FT	646894	2892	1438	A-	205	A-	468	A-	51		53		73	
FT	646895	2952	1416	A+	194		534	A+	38		47		76	
FT	646896	2888	1382	A+	182		476	A+	51		54		86	
FT	646897	9319	4574	A+	503	A+	1388	A+	120		243	B+	332	A-
FT	646898	2906	1402	A-	168		500	A+	46		48		75	
FT	646899	2963	1454	A+	208	A+	499	A+	43		49		83	
FT	646900	2999	1416	A+	190		518	A-	35		55		86	

Grade 7 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646902	2837	1416	A+	194		501	A-	40		50		78	
FT	646903	2915	1415	A+	220	A-	476	A-	40		54		71	
FT	646904	2962	1438	A+	207	A+	508	A-	49		41		78	
FT	646907	2894	1378	A+	197		475	A-	39		52		69	
FT	646908	2929	1453	A-	205	A+	498	A-	46		53		80	
FT	646909	9408	4653	A+	508	A-	1409	A-	132		235	A-	321	A-
FT	646910	2842	1305	A+	202	A-	501	A-	37		50		82	
FT	646911	2901	1422	A-	192		488	A-	41		44		84	
FT	646912	2905	1409	A+	192		482	A+	47		41		79	
FT	646913	3035	1534	A+	226	A+	486	A+	44		52		79	
FT	646914	9267	4534	A-	489	A+	1397	A-	133		239	A+	343	A+
FT	646915	2894	1420	A+	192		493	A-	48		62		62	
FT	646916	2913	1412	A+	189		500	A+	44		46		90	
FT	646917	2862	1391	A-	182		456	A-	34		51		77	
FT	646918	3008	1442	A+	188		499	A-	54		49		74	
FT	646919	9428	4567	A+	526	A+	1394	A+	120		245	A+	327	A+
FT	646920	2835	1383	A-	206	A-	469	A-	48		45		67	
FT	646921	2980	1439	A-	197		499	A-	37		52		68	
FT	646922	2932	1406	A-	207	A-	514	A-	53		52		80	
FT	646923	2890	1404	A-	214	A-	473	A+	47		61		63	
FT	646924	2907	1443	A+	206	A-	506	A-	41		53		77	
FT	646925	9352	4552	A-	510	A-	1397	A-	122		241	A+	337	A+

Grade 8 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646811	9317	4516	A-	535	A-	1420	A-	107		185		280	A+
FT	646812	2892	1376	A-	188		465	A-	43		46		71	
FT	646813	2863	1394	A+	201	A-	424	A+	43		52		75	
FT	646814	2851	1347	A+	196		461	A+	50		48		60	
FT	646815	2994	1508	A+	195		445	A+	47		56		74	
FT	646816	9315	4486	A+	542	A+	1410	A+	116		183		277	A+
FT	646817	2826	1363	A+	198		434	A-	40		45		72	
FT	646818	2873	1395	A+	194		405	A-	46		59		62	
FT	646819	2875	1403	A+	183		462	A+	40		64		77	
FT	646820	2797	1383	A+	183		434	A-	34		62		61	
FT	646821	9318	4480	A-	551	A+	1386	A-	105		189		293	A-
FT	646822	2908	1371	A-	191		457	A+	48		55		76	
FT	646823	2923	1459	A+	208	A-	470	A-	34		58		68	
FT	646824	2855	1362	A-	185		460	A-	42		57		66	
FT	646825	2816	1395	A+	183		417	A+	47		52		73	
FT	646826	2869	1397	A-	199		431	A+	48		51		82	
FT	646827	2846	1414	A-	209	A-	408	A-	41		55		74	
FT	646828	2836	1385	A-	182		415	A+	32		51		66	
FT	646829	2828	1400	A-	197		458	A-	34		50		68	
FT	646830	2891	1366	A+	198		438	A+	30		45		75	
FT	646831	9219	4481	A-	538	A-	1401	A-	101		187		280	A+
FT	646832	2973	1466	A-	179		467	A-	36		69		69	
FT	646834	9328	4501	A-	544	A-	1398	A-	106		191		274	A-
FT	646835	2902	1423	A-	187		464	A-	31		42		67	
FT	646837	2906	1420	A+	187		446	A+	39		53		81	
FT	646838	9350	4505	A+	567	A+	1407	A-	113		189		277	A+
FT	646839	2881	1397	A-	191		462	A-	47		47		75	
FT	646840	2903	1344	A-	200	A-	502	A-	33		43		61	

Grade 8 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646841	2881	1383	A+	203	A-	450	A-	35		47		72	
FT	646842	2915	1382	A+	190		460	A-	42		55		69	
FT	646843	2869	1403	A+	172		419	A-	40		43		79	
FT	646845	2903	1403	A+	181		470	A-	39		48		70	
FT	646846	2798	1364	A-	180		434	A-	39		48		77	
FT	646848	9261	4427	A+	549	A-	1422	A+	113		190		288	A+
FT	646849	2883	1394	A-	172		447	A-	40		31		65	
FT	646851	2841	1362	A-	185		460	A-	37		44		67	
FT	646852	2988	1445	B+	213	A+	494	A+	42		46		72	
FT	646853	2828	1377	A+	204	A+	421	A-	38		47		80	
FT	646854	2882	1408	A-	191		466	A-	39		48		58	
FT	646855	9241	4480	A+	548	A+	1410	A-	106		196		273	A+
FT	646856	9348	4509	A+	557	A-	1419	A-	101		194		283	A+
FT	646858	2866	1385	A-	218	A-	450	A-	37		51		72	
FT	646859	2929	1440	A+	186		452	A+	36		44		67	
FT	646861	2854	1409	A+	183		465	A-	29		45		78	
FT	646862	2893	1393	A+	178		432	A+	35		56		76	
FT	646863	9310	4485	A-	537	A+	1385	A-	110		196		275	A-
FT	646864	2830	1344	A-	192		462	A-	36		54		70	
FT	646865	2894	1381	A-	197		482	A-	41		50		53	
FT	646866	2809	1350	B-	201	A-	454	A-	40		48		53	
FT	646867	2807	1319	A-	192		449	A-	32		50		69	

Grade 11 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646731	2636	1264	A-	130		277	A+	29		39		45	
FT	646732	2598	1247	A+	126		287	A-	33		32		54	
FT	646733	2551	1265	A-	104		292	A-	27		34		53	
FT	646734	2601	1264	A+	129		285	A+	34		46		50	
FT	646735	10477	5153	A+	846	A-	1695	A-	116		284	C+	357	A+
FT	646736	2628	1275	A-	116		282	B-	26		46		56	
FT	646737	2546	1223	A-	133		308	A+	33		44		36	
FT	646739	2588	1270	A-	110		286	A-	34		34		37	
FT	646740	10484	5192	A-	821	A-	1725	A-	99		273	A-	354	A-
FT	646741	2549	1233	A-	120		255	A-	23		40		42	
FT	646742	2531	1241	A+	115		257	A+	26		40		51	
FT	646743	2669	1275	A+	116		252	A-	33		49		47	
FT	646744	2554	1238	A+	113		280	A-	29		30		53	
FT	646745	10450	5113	A+	834	A-	1715	A+	120		275	A-	355	A-
FT	646746	2619	1273	A-	115		289	B-	20		46		41	
FT	646747	2506	1212	A-	119		254	A+	30		36		48	
FT	646753	2610	1246	A-	124		281	A+	30		44		53	
FT	646754	2585	1243	A+	102		303	A+	30		42		48	
FT	646755	2594	1272	A-	118		265	A-	26		38		52	
FT	646756	2643	1258	A+	137		248	A-	25		48		48	
FT	646757	10521	5148	A-	833	A-	1731	B-	118		266	C-	359	A-
FT	646758	2571	1237	A+	111		283	A+	35		39		45	
FT	646759	2584	1263	A+	110		309	A-	28		45		48	
FT	646760	2603	1285	A+	112		265	A+	35		41		45	
FT	646761	2613	1274	A-	118		264	A+	28		42		51	
FT	646762	10459	5117	A+	839	A+	1704	A+	121		278	A+	366	A-
FT	646765	2580	1246	A-	121		277	A-	37		41		43	
FT	646768	2528	1240	A+	127		259	A+	30		45		45	

Grade 11 Mathematics			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	646769	2591	1274	A+	126		266	A+	35		36		46	
FT	646770	10452	5130	A-	813	A-	1729	A+	114		279	B+	362	A-
FT	646771	10403	5090	A+	836	A-	1707	A-	114		281	B+	353	A+
FT	646772	2581	1244	A+	106		307	A+	29		32		57	
FT	646773	2583	1259	B+	124		277	A-	30		34		46	
FT	646774	2645	1251	A+	121		299	A-	40		45		39	
FT	646775	2630	1234	A+	111		281	A+	32		43		40	
FT	646776	10465	5138	A+	850	A+	1689	A+	109		279	B+	350	A-
FT	646777	2558	1231	A+	102		269	A+	25		41		56	
FT	646778	2605	1295	A-	117		287	A-	20		37		55	
FT	646779	2573	1231	A-	118		281	C-	33		46		44	
FT	646780	2609	1274	A+	120		278	A-	29		31		51	
FT	646781	10476	5128	A-	839	A-	1684	A-	109		273	A+	365	A-
FT	646782	2633	1271	A-	127		294	A-	36		46		52	
FT	646783	2616	1309	A-	128		276	A+	39		33		40	
FT	646784	2601	1287	B-	138		319	A-	31		43		56	
FT	646785	2616	1231	A-	124		275	A-	30		48		52	
FT	646786	10523	5163	A-	835	A-	1706	A-	114		283	A-	357	A-
FT	646787	2608	1305	A-	114		290	A-	35		53		52	
FT	646788	2626	1242	A-	124		271	A-	34		37		47	
FT	646789	2559	1257	A+	129		293	A-	44		38		60	
FT	646790	2514	1204	A+	134		274	A-	28		45		38	

Appendix M: Science Field Test Differential Item Functioning

***M=Male, F=Female, AM=American Indian, AS=Asian, BL=African American/Black, HI= Hispanic, MU=Multiple Ethnicities, WH=White**
200 student minimum for reporting

Grade 5 Science			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	647385	3642	1831	A+	241	A+	555	A-	67		58		122	
FT	647386	3789	1843	A+	247	A-	624	A-	55		83		123	
FT	647387	6858	3325	A-	463	A-	1285	A-	100		180		177	
FT	647388	3664	1811	A-	232	A+	582	A+	58		71		93	
FT	647389	3708	1821	A+	239	B-	579	A-	55		63		117	
FT	647390	3748	1892	A-	255	A-	619	B-	58		82		104	
FT	647391	6915	3286	A+	524	A+	1307	A+	99		174		185	
FT	647392	3749	1831	B+	256	A-	606	A-	79		88		106	
FT	647393	3679	1817	A+	235	A-	578	A-	58		67		105	
FT	647394	3730	1855	A+	255	A-	587	A+	57		75		113	
FT	647395	3718	1860	A-	251	A-	584	A+	62		99		113	
FT	647396	3679	1857	A+	237	A-	602	A-	65		85		112	
FT	647397	3705	1824	A+	224		613	A-	49		80		106	
FT	647398	6818	3235	A+	495	A-	1266	A-	101		179		194	
FT	647399	3711	1841	B+	213	A-	614	A-	68		72		132	
FT	647400	3776	1854	A+	235	A-	597	A-	69		72		135	
FT	647401	3703	1847	A+	245	A-	580	A+	51		68		110	
FT	647402	3734	1873	A-	227	A+	602	A-	63		73		110	
FT	647403	3708	1806	A-	223	A-	552	A+	69		68		113	
FT	647404	3691	1833	A+	244		556	A-	58		72		104	
FT	647405	3700	1814	A+	247	A+	588	A-	71		58		105	
FT	647406	3585	1791	A-	229	A+	602	A-	54		75		120	
FT	647407	3657	1772	A+	247	A-	583	A-	59		68		102	
FT	647408	6872	3301	A-	492	A+	1310	A-	91		170		190	

Grade 5 Science			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	647409	6921	3335	A+	499	A+	1294	A-	104		175		184	
FT	647410	3739	1871	A+	210	A+	612	A+	45		74		125	
FT	647411	3802	1897	A+	273	A+	587	A+	57		85		118	
FT	647412	6857	3278	A+	479	A-	1304	A+	104		178		189	
FT	647413	3710	1803	A+	248	A-	578	A-	50		76		110	
FT	647414	3680	1804	B+	243	A-	614	A-	66		81		107	
FT	647415	3743	1849	A+	232	A-	614	A+	49		68		122	
FT	647416	6912	3296	A-	504	A-	1302	A+	112		169		183	
FT	647417	3676	1824	A-	238	A+	562	A-	70		71		118	
FT	647418	3606	1805	A-	206	A-	609	A-	61		77		100	
FT	647419	3782	1894	A+	266	A-	570	A+	61		89		106	
FT	647420	3678	1797	A-	238	A+	587	A+	66		66		101	
FT	647421	3775	1850	A+	230	A+	603	A+	60		80		114	
FT	647422	3767	1875	A+	241	A-	595	A+	55		57		103	
FT	647423	3652	1864	A+	258	A+	556	A-	55		81		122	
FT	647424	3612	1776	A-	224	A+	568	A-	80		70		111	
FT	647425	3752	1845	A-	259	A-	627	A-	60		71		121	
FT	647426	6863	3275	A+	507	A+	1255	A+	102		166		183	
FT	647427	3821	1860	A-	246	A+	612	A-	68		80		103	
FT	647428	3666	1791	A-	229	A-	648	A-	63		76		109	
FT	647429	3679	1868	A+	254	A-	587	A-	54		82		106	
FT	647430	3684	1813	A-	241	A-	572	A-	64		80		99	
FT	647431	6839	3305	A+	483	A-	1276	A+	104		180		181	
FT	647432	3614	1758	A+	224	B-	548	A-	70		63		128	
FT	647433	6826	3294	A+	483	A-	1275	A-	96		175		183	
FT	647434	3715	1853	A-	229	B-	599	A-	53		60		133	

Grade 8 Science			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	647100	6174	2925	A+	350	A-	975	A-	79		124		148	
FT	647101	3651	1770	A+	242	A-	574	A+	35		58		108	
FT	647102	3670	1787	A+	231	A-	571	A-	58		64		97	
FT	647103	3651	1816	A+	251	A-	534	A-	48		69		108	
FT	647104	6088	2917	A+	314	A+	990	A-	83		125		156	
FT	647105	3724	1816	A+	260	A-	594	A+	54		68		94	
FT	647106	3680	1772	A+	232	A-	543	A-	53		62		107	
FT	647107	6161	2937	A+	352	A-	970	A-	87		123		156	
FT	647108	3657	1763	A+	232	A+	554	A-	48		58		108	
FT	647109	3615	1713	A+	252	A-	550	A-	46		67		103	
FT	647111	3661	1811	A+	228		543	A-	48		70		93	
FT	647112	3691	1782	B+	226	A-	540	A-	57		70		108	
FT	647113	3753	1810	A-	240	A-	572	A-	37		70		112	
FT	647114	3654	1715	A+	253	B-	536	A+	43		78		93	
FT	647115	3621	1761	A-	243	B-	536	B-	51		77		111	
FT	647117	3691	1798	A+	233	A-	577	A+	48		70		98	
FT	647118	3732	1799	A+	267	B+	535	B+	41		64		107	
FT	647119	3598	1771	A-	245	A-	542	A-	48		60		105	
FT	647120	3594	1768	A-	249	A-	548	A-	44		57		101	
FT	647121	3706	1820	A-	272	A-	537	A+	42		80		108	
FT	647122	3746	1877	A-	245	A-	601	A-	46		63		95	
FT	647123	6169	2944	A-	350	A-	967	A-	81		133		152	
FT	647124	3664	1824	C-	235	A-	582	A-	37		59		110	
FT	647128	3567	1762	A-	244	A-	556	A-	44		65		91	
FT	647129	3669	1768	A+	236	B-	574	A+	54		63		93	
FT	647130	3634	1775	A+	239	A-	528	A-	46		52		108	
FT	647132	6184	2937	A-	363	A-	965	A-	88		125		165	
FT	647133	3696	1796	A+	253	A-	552	A-	49		76		113	

Grade 8 Science			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	647134	3655	1817	A+	245	A-	554	A-	46		75		98	
FT	647135	3680	1744	A+	246	A-	551	A-	45		72		95	
FT	647136	6174	2981	A+	344		978	A-	82		130		160	
FT	647138	3668	1792	A+	252	A-	533	A-	40		63		100	
FT	647140	3716	1833	A+	255	A-	572	A-	41		51		109	
FT	647141	3742	1826	A-	259	A-	565	A-	51		68		99	
FT	647142	3624	1778	A+	246	A+	523	A+	39		59		102	
FT	647145	6160	2942	A+	348	A-	998	A-	74		128		153	
FT	647146	3569	1752	A+	227	A-	563	A-	41		73		86	
FT	647147	6113	2927	A+	365	A+	972	A-	91		117		162	
FT	647148	3585	1721	A-	220	A-	531	A+	44		70		106	
FT	647149	6110	2854	A+	353		974	A+	85		139		149	
FT	647150	3673	1762	A-	237	A+	547	A-	45		70		103	
FT	647151	3639	1789	A-	258	A-	561	A-	39		64		100	
FT	647152	3716	1813	A+	228	A-	568	A-	46		62		91	
FT	647154	3826	1878	A-	255	A-	589	A+	55		64		110	
FT	647155	3572	1754	A+	239	A+	560	A+	56		64		74	
FT	647156	6150	2927	A+	330	A-	948	A-	87		129		165	
FT	647157	3653	1790	A-	226	A-	600	A-	41		71		96	
FT	647158	3661	1766	B-	239	B-	564	B-	44		62		109	
FT	647159	3626	1788	A+	224	A-	553	A+	49		69		106	
FT	647220	3662	1707	A+	232	A-	570	A-	44		70		94	

Grade 11 Science			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	647160	3638	1775	A-	242	A-	354	A-	49		64		94	
FT	647161	3606	1776	A-	232	A-	389	A-	51		71		96	
FT	647162	6118	2952	A-	395	B-	1190	A-	73		131		153	
FT	647163	3725	1821	A+	244	A-	412	A-	52		91		112	
FT	647164	6120	2946	A-	369	A-	1194	B-	64		129		146	
FT	647165	3813	1828	A-	222	A-	411	A-	45		77		99	
FT	647167	3694	1724	A-	216	A-	431	A+	48		84		100	
FT	647169	3572	1765	A+	187		393	A-	45		64		123	
FT	647170	3673	1843	A+	241	A+	420	A-	40		71		87	
FT	647171	3671	1785	A+	226	A+	401	A+	41		79		110	
FT	647172	3618	1756	A+	238	A-	409	A-	41		80		89	
FT	647173	3608	1774	A-	228	A+	407	A-	31		82		99	
FT	647175	3573	1763	A-	251	A-	399	A-	43		77		109	
FT	647176	3714	1809	A+	239	A+	432	A+	45		82		120	
FT	647177	3688	1826	A-	241	A+	414	A+	50		82		96	
FT	647178	3749	1813	A-	231	A-	406	A-	47		63		105	
FT	647179	3568	1727	A-	223	A-	423	A+	34		74		103	
FT	647180	6160	2965	A-	384	A+	1232	A+	70		136		139	
FT	647181	3658	1784	A+	229	A-	394	A+	33		68		93	
FT	647182	3755	1856	A-	285	A-	412	A-	33		79		106	
FT	647184	3608	1788	B-	232	B-	412	A-	44		66		95	
FT	647185	3764	1846	A-	239	A+	392	A+	39		87		102	
FT	647187	6135	2999	A-	366	A+	1184	A-	69		143		159	
FT	647189	3634	1788	A-	222	A-	404	A+	31		83		90	
FT	647190	3779	1876	A-	211	A-	404	A-	47		72		103	
FT	647191	3682	1808	A+	220	A-	409	A-	45		67		87	
FT	647192	3630	1780	A-	240	A+	415	A+	39		86		92	

Grade 11 Science			Gender DIF (REF=M, FOC=F)		Ethnicity DIF (REF=WH, FOC=BL)		Ethnicity DIF (REF=WH, FOC=HI)		Ethnicity DIF (REF=WH, FOC=AM		Ethnicity DIF (REF=WH, FOC=AS)		Ethnicity DIF (REF=WH, FOC=MU	
Type	Item ID	N	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code	NFoc	Code
FT	647193	6203	3007	A-	388	A-	1195	A-	80		143		149	
FT	647194	3637	1736	A+	238	A-	389	A-	36		73		89	
FT	647195	3683	1793	A+	251	A+	383	A+	40		86		92	
FT	647197	3686	1780	A-	224	A-	418	A-	43		73		99	
FT	647198	3678	1798	A+	227	A+	396	A+	53		81		118	
FT	647199	3596	1770	A+	226	A-	386	A+	49		65		92	
FT	647200	6044	2940	A+	364	A+	1180	A+	63		130		152	
FT	647203	3644	1796	A+	245	B+	426	A+	48		80		95	
FT	647204	3658	1829	A-	243	A-	363	A+	39		68		106	
FT	647205	3667	1818	A+	231	A-	395	A-	35		81		105	
FT	647206	3655	1796	B-	226	A-	401	A+	35		80		100	
FT	647208	6196	2952	A+	380	A+	1231	A+	77		128		146	
FT	647209	3529	1696	A-	201	A+	379	A+	40		73		93	
FT	647210	6309	3061	A-	385	A+	1212	A-	60		135		163	
FT	647211	3741	1884	A-	213	A+	426	A-	35		85		105	
FT	647212	3618	1771	A-	199		422	A-	45		75		100	
FT	647213	6154	2961	A+	393	A+	1209	A+	81		132		162	
FT	647214	3760	1826	A-	243	B-	422	A-	39		66		105	
FT	647215	3712	1832	A+	228	A-	426	A-	43		68		106	
FT	647216	3634	1806	A+	252	A+	413	A+	37		71		95	
FT	647217	3612	1743	A-	230	A+	398	A-	43		85		91	
FT	647219	3657	1757	A-	243	A+	391	A+	46		81		86	
FT	647221	6139	2965	A+	372	A-	1226	A+	69		128		179	

Appendix N: Reading, Mathematics, and Science Operational Form Calibration Summaries

Winsteps Table 3.1 Interpretation Guide

Tables in this Appendix are taken directly from the Winsteps output file and summarize calibration run of each form for each grade.

Grade 3

Number of students

Number of Items

Items are dichotomous

```
TABLE 3.1 NESA Grade 3 Reading FT 2009    ZOU508WS.TXT Jun 12 12:53 2009
INPUT: 12420 STUDENTS  210 Readings  MEASURED: 2134 STUDENTS  42 Readings  2 CATS
-------------------------------------------------------------------------------

     SUMMARY OF 2130 MEASURED (NON-EXTREME) STUDENTS
-------------------------------------------------------------------------------
|          RAW                            MODEL         INFIT        OUTFIT    |
|         SCORE     COUNT     MEASURE    ERROR      MNSQ   ZSTD    MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      27.6      42.0        .93      .41       .99     .1     .99     .1 |
| S.D.       7.9        .0       1.18      .10       .17     .9     .45    1.1 |
| MAX.      41.0      42.0       4.33     1.04      1.65    4.0    9.13    5.0 |
| MIN.       4.0      42.0      -2.65      .34       .58   -2.6     .10   -1.9 |
|-----------------------------------------------------------------------------|
| REAL RMSE     .43  ADJ.SD    1.09  SEPARATION  2.53  STUDEN RELIABILITY  .86 |
|MODEL RMSE     .42  ADJ.SD    1.10  SEPARATION  2.61  STUDEN RELIABILITY  .87 |
| S.E.  OF STUDENT MEAN = .03                                                 |
```

Student mean logit relative to the form

Fit "Z" should have mean = 0 and SD = 1

Form Reliability*

*Form Reliability run in Winsteps is run on an anchored file

Reading

Grade 3

```
TABLE 3.1 NESA Grade 3 Reading 2012 operational S12gr3 R_OUT.TXT  Sep 18 15:09 2012
INPUT: 152741 STUDENT  45 Math  REPORTED: 22157 STUDENT  45 Math  2 CATS WINSTEPS 3.74.0
```

```
SUMMARY OF 22157 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      31.5      45.0       .3348   .4005                                |
| S.D.       8.1        .3      1.0943   .1471                                |
| MAX.      45.0      45.0      4.3863  1.8057                                |
| MIN.        .0      18.0     -5.9607   .3130       .72   -3.4    .40   -3.3 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4315 TRUE SD  1.0057  SEPARATION  2.33  STUDEN RELIABILITY  .84 |
|MODEL RMSE  .4266 TRUE SD  1.0077  SEPARATION  2.36  STUDEN RELIABILITY  .85 |
| S.E. OF STUDENT MEAN = .0074                                                |
```

Grade 4

```
TABLE 3.1 NESA Grade 4 Reading 2012 operational S12gr4 R_OUT.TXT  Aug 13 16:23 2012
INPUT: 152741 STUDENT  45 Math  REPORTED: 21975 STUDENT  45 Math  2 CATS WINSTEPS 3.74.0
```

```
SUMMARY OF 21975 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      29.8      45.0       .2413   .3755                                |
| S.D.       8.0        .3      1.0184   .1153                                |
| MAX.      45.0      45.0      4.5360  1.8055                                |
| MIN.       2.0      20.0     -3.8928   .3128       .73   -2.8    .30   -2.7 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4007 TRUE SD   .9363  SEPARATION  2.34  STUDEN RELIABILITY  .85 |
|MODEL RMSE  .3928 TRUE SD   .9396  SEPARATION  2.39  STUDEN RELIABILITY  .85 |
| S.E. OF STUDENT MEAN = .0069                                                |
```

Grade 5

```
TABLE 3.1 NESA Grade 5 Reading 2012  Operational S12gr5 R_OUT.TXT  Sep 20 11:06 2012
INPUT: 152741 STUDENT  48 Reading  REPORTED: 21635 STUDENT  48 Reading  2 CATS WINSTEPS 3.74.0
```

```
    SUMMARY OF 21635 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      32.6      48.0       .3651   .3818                                |
| S.D.       8.7        .3      1.1065   .1313                                |
| MAX.      48.0      48.0      4.7025  1.8116                                |
| MIN.       5.0      21.0     -3.0331   .3089       .68   -3.2    .24   -3.1 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4116 TRUE SD  1.0271  SEPARATION  2.50  STUDEN RELIABILITY  .86 |
|MODEL RMSE  .4038 TRUE SD  1.0302  SEPARATION  2.55  STUDEN RELIABILITY  .87 |
| S.E. OF STUDENT MEAN = .0075                                                |
```

Grade 6

```
TABLE 3.1 NESA Grade 6 Reading 2012 operational S12gr6 R_OUT.TXT  Sep 20 11:07 2012
INPUT: 152741 STUDENT  48 Reading  REPORTED: 21391 STUDENT  48 Reading  2 CATS WINSTEPS 3.74.0
```

```
    SUMMARY OF 21391 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      33.0      48.0       .3297   .3879                                 |
| S.D.       8.5        .2      1.1147   .1337                                 |
| MAX.      48.0      48.0      4.6982  1.8302                                 |
| MIN.        .0      25.0     -6.1104   .3107       .62   -3.5    .20   -3.3 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4186 TRUE SD  1.0332  SEPARATION  2.47  STUDEN RELIABILITY  .86 |
|MODEL RMSE  .4103 TRUE SD  1.0365  SEPARATION  2.53  STUDEN RELIABILITY  .86 |
| S.E. OF STUDENT MEAN = .0076                                                |
```

Grade 7

```
TABLE 3.1 NESA Grade 7 Reading 2012operational S12gr7 R_OUT.TXT  Sep 20 11:08 2012
INPUT: 152741 STUDENT  48 Reading  REPORTED: 20977 STUDENT  48 Reading  2 CATS WINSTEPS 3.74.0
```

```
     SUMMARY OF 20977 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      32.5      48.0       .3263   .3793                                 |
| S.D.       8.7        .6      1.0971   .1228                                 |
| MAX.      48.0      48.0      4.6733  1.8123                                 |
| MIN.        .0      21.0     -5.1593   .3089       .67   -3.7    .26   -3.4 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4052 TRUE SD  1.0196  SEPARATION  2.52  STUDEN RELIABILITY  .86 |
|MODEL RMSE  .3987 TRUE SD  1.0221  SEPARATION  2.56  STUDEN RELIABILITY  .87 |
| S.E. OF STUDENT MEAN = .0076
```

Grade 8

```
TABLE 3.1 NESA Grade 8 Reading 2012operational S12gr8 R_OUT.TXT  Sep 20 11:09 2012
INPUT: 152741 STUDENT  50 Reading  REPORTED: 20768 STUDENT  50 Reading  2 CATS WINSTEPS 3.74.0
```

```
     SUMMARY OF 20768 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      33.7      50.0       .1839   .3612                                 |
| S.D.       8.8        .7      1.0239   .0994                                 |
| MAX.      50.0      50.0      4.5661  1.8098                                 |
| MIN.        .0      22.0     -6.1228   .3007       .72   -3.2    .31   -3.0 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .3800 TRUE SD   .9507  SEPARATION  2.50  STUDEN RELIABILITY  .86 |
|MODEL RMSE  .3746 TRUE SD   .9529  SEPARATION  2.54  STUDEN RELIABILITY  .87 |
| S.E. OF STUDENT MEAN = .0071                                                |
```

Grade 11

```
TABLE 3.1 NESA Grade 11 Reading 2012        S12gr11 R_OUT.TXT  Sep 20 11:09 2012
INPUT: 152741 STUDENT  50 Reading  REPORTED: 20868 STUDENT  50 Reading  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 20868 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      32.6      50.0       .0508   .3705                                |
| S.D.       9.8       1.0      1.1685   .1142                                |
| MAX.      50.0      50.0      4.6249  1.8166                                |
| MIN.        .0      23.0     -6.2814   .3048       .70   -3.0    .16   -2.7 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .3963 TRUE SD  1.0993  SEPARATION  2.77  STUDEN RELIABILITY  .88 |
|MODEL RMSE  .3877 TRUE SD  1.1023  SEPARATION  2.84  STUDEN RELIABILITY  .89 |
| S.E. OF STUDENT MEAN = .0081                                                |
```

Mathematics

Grade 3

```
TABLE 3.1 NESA Grade 3 Math 2012            S12gr3 M_OUT.TXT  Sep 20 12:55 2012
INPUT: 152727 STUDENT  50 Math  REPORTED: 22214 STUDENT  50 Math  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 22214 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      35.7      50.0       .2077   .4149                                |
| S.D.       9.8        .2      1.2770   .2083                                |
| MAX.      50.0      50.0      4.2185  1.8054                                |
| MIN.       3.0      25.0     -3.9977   .2959       .74   -3.0    .28   -2.8 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4689 TRUE SD  1.1878  SEPARATION  2.53  STUDEN RELIABILITY  .87 |
|MODEL RMSE  .4642 TRUE SD  1.1896  SEPARATION  2.56  STUDEN RELIABILITY  .87 |
| S.E. OF STUDENT MEAN = .0086                                                |
```

Grade 4

```
TABLE 3.1 NESA Grade 4 Math 2012 operational S12gr4 M_OUT.TXT  Jun 22 11:03 2012
INPUT: 154499 STUDENT  55 Math  REPORTED: 22033 STUDENT  55 Math  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 22033 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      38.0      55.0       .2000   .3854                                |
| S.D.      11.0        .4      1.2888   .1919                                |
| MAX.      55.0      55.0      4.4667  1.8066                                |
| MIN.       2.0      27.0     -3.9968   .2843       .69   -3.6    .30   -3.4 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4351 TRUE SD  1.2131  SEPARATION  2.79  STUDEN RELIABILITY  .89 |
|MODEL RMSE  .4305 TRUE SD  1.2148  SEPARATION  2.82  STUDEN RELIABILITY  .89 |
| S.E. OF STUDENT MEAN = .0087                                                |
```

Grade 5

```
TABLE 3.1 NESA Grade 5 Math 2012 operational S12gr5 M_OUT.TXT  Jun 22 11:03 2012
INPUT: 154499 STUDENT  55 Math  REPORTED: 21689 STUDENT  55 Math  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 21689 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      39.2      55.0       .2624   .3856                                |
| S.D.      10.4        .3      1.2134   .1843                                |
| MAX.      55.0      55.0      4.3868  1.8028                                |
| MIN.       4.0      28.0     -3.6626   .2811       .73   -3.6    .30   -3.5 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4328 TRUE SD  1.1336  SEPARATION  2.62  STUDEN RELIABILITY  .87 |
|MODEL RMSE  .4274 TRUE SD  1.1356  SEPARATION  2.66  STUDEN RELIABILITY  .88 |
| S.E. OF STUDENT MEAN = .0082                                                |
```

Grade 6

```
TABLE 3.1 NESA Grade 6 Math 2012 operational  S12gr6M_OUT.TXT  Jun 22 11:29 2012
INPUT: 154499 STUDENT  58 Math  REPORTED: 21434 STUDENT  58 Math  2 CATS WINSTEPS 3.74.0
    SUMMARY OF 21434 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      41.2      58.0       .2654   .4007                                |
| S.D.      11.6        .5      1.3749   .2320                                |
| MAX.      58.0      58.0      4.4443  1.8060                                |
| MIN.       6.0      29.0     -3.3594   .2767       .74   -2.6    .25   -2.6 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4698 TRUE SD  1.2921  SEPARATION  2.75  STUDEN RELIABILITY  .88 |
|MODEL RMSE  .4630 TRUE SD  1.2946  SEPARATION  2.80  STUDEN RELIABILITY  .89 |
| S.E. OF STUDENT MEAN = .0094                                                |
```

Grade 7

```
TABLE 3.1 NESA Grade 7 Math 2012            S12gr7 M_OUT.TXT  Sep 20 12:56 2012
INPUT: 152727 STUDENT  58 Math  REPORTED: 20995 STUDENT  58 Math  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 20995 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      39.1      58.0       .2263   .3787                                |
| S.D.      12.2        .4      1.3641   .2064                                |
| MAX.      58.0      58.0      4.6304  1.8074                                |
| MIN.       6.0      29.0     -3.1847   .2769       .72   -3.7    .27   -3.4 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4361 TRUE SD  1.2926  SEPARATION  2.96  STUDEN RELIABILITY  .90 |
|MODEL RMSE  .4313 TRUE SD  1.2942  SEPARATION  3.00  STUDEN RELIABILITY  .90 |
| S.E. OF STUDENT MEAN = .0094                                                |
```

Grade 8

```
TABLE 3.1 NESA Grade 8 Math 2012            S12gr8 M_OUT.TXT  Sep 20 12:57 2012
INPUT: 152727 STUDENT  60 Math  REPORTED: 20800 STUDENT  60 Math  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 20800 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      39.1      60.0       .1143   .3553                                |
| S.D.      12.7        .7      1.3074   .1808                                |
| MAX.      60.0      60.0      4.6628  1.8049                                |
| MIN.       1.0      30.0     -5.0908   .2700       .76   -3.2    .32   -3.0 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4041 TRUE SD  1.2434  SEPARATION  3.08  STUDEN RELIABILITY  .90 |
|MODEL RMSE  .3987 TRUE SD  1.2451  SEPARATION  3.12  STUDEN RELIABILITY  .91 |
| S.E. OF STUDENT MEAN = .0091                                                |
```

Grade 11

```
TABLE 3.1 NESA Grade 11 Math 2012           S12gr11 M_OUT.TXT  Sep 20 12:58 2012
INPUT: 152727 STUDENT  60 Math  REPORTED: 20838 STUDENT  60 Math  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 20838 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      37.4      60.0       .0439   .3425                                |
| S.D.      13.1        .8      1.2893   .1530                                |
| MAX.      60.0      60.0      4.7359  1.8066                                |
| MIN.        .0      30.0     -5.4430   .2684       .79   -3.0    .28   -2.8 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .3795 TRUE SD  1.2322  SEPARATION  3.25  STUDEN RELIABILITY  .91 |
|MODEL RMSE  .3751 TRUE SD  1.2335  SEPARATION  3.29  STUDEN RELIABILITY  .92 |
| S.E. OF STUDENT MEAN = .0089
```

Science

Grade 5

```
TABLE 3.1 NESA Grade 5 Science 2012 operation S12gr5S_OUT.TXT  Jun  7 18:12 2012
INPUT: 65294 STUDENT  50 Science  REPORTED: 21693 STUDENT  50 Science  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 21693 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      34.0      50.0       .0152   .3720                                |
| S.D.       8.7        .3      1.0729   .1325                                |
| MAX.      50.0      50.0      4.3914  1.8344                                |
| MIN.       1.0      25.0     -6.6307   .3045       .72   -3.0    .29   -1.8 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .4008 TRUE SD   .9952  SEPARATION  2.48  STUDEN RELIABILITY  .86 |
|MODEL RMSE  .3949 TRUE SD   .9976  SEPARATION  2.53  STUDEN RELIABILITY  .86 |
| S.E. OF STUDENT MEAN = .0073                                                |
```

Grade 8

```
TABLE 3.1 NESA Grade 8 Science 2012 operation S12gr8S_OUT.TXT  Jun  7 18:57 2012
INPUT: 65294 STUDENT  60 Science  REPORTED: 20816 STUDENT  60 Science  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 20816 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      39.7      60.0       .0056   .3276                                |
| S.D.      10.4        .9      1.0156   .0948                                |
| MAX.      60.0      60.0      4.7114  1.8326                                |
| MIN.        .0      30.0     -6.5026   .2770       .67   -3.4    .26   -3.2 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .3467 TRUE SD   .9546  SEPARATION  2.75  STUDEN RELIABILITY  .88 |
|MODEL RMSE  .3410 TRUE SD   .9567  SEPARATION  2.81  STUDEN RELIABILITY  .89 |
| S.E. OF STUDENT MEAN = .0070
```

Grade 11

```
ABLE 3.1 NESA Grade 11 Science 2012 operation S12gr11S_OUT.TXT  Jun  7 19:15 2012
INPUT: 65294 STUDENT  60 Science  REPORTED: 20835 STUDENT  60 Science  2 CATS WINSTEPS 3.74.0
     SUMMARY OF 20835 MEASURED (EXTREME AND NON-EXTREME) STUDENT
-------------------------------------------------------------------------------
|          TOTAL                          MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN      37.8      59.9       .0051   .3215                                |
| S.D.      11.8       1.3      1.0868   .0949                                |
| MAX.      60.0      60.0      4.7885  1.8310                                |
| MIN.       1.0      30.0     -4.2530   .2702       .76   -3.4    .29   -3.3 |
|-----------------------------------------------------------------------------|
| REAL RMSE  .3399 TRUE SD  1.0323  SEPARATION  3.04  STUDEN RELIABILITY  .90 |
|MODEL RMSE  .3352 TRUE SD  1.0338  SEPARATION  3.08  STUDEN RELIABILITY  .90 |
| S.E. OF STUDENT MEAN = .0075                                                |
```

Appendix O: Science Performance Level Descriptors

The Performance Level Descriptors provide meaning to the scale score metric and give a qualitative description of the numeric scores. The attached Performance Level Descriptors were used by the panelists during both the Bookmark Standard Setting and the Contrasting Groups study. The labels used for the levels were *Below the Standards, Meets the Standards,* and *Exceeds the Standards.*

Nebraska State Accountability-Science (NeSA-S) Performance Level Descriptors Grade 5		
Below the Standards	**Meets the Standards**	**Exceeds the Standards**
Overall student performance in science reflects *unsatisfactory* performance on the standards and *insufficient* understanding of the content at fifth grade. A student scoring at the Below the Standards level *inconsistently* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences.	Overall student performance in science reflects *satisfactory* performance on the standards and *sufficient* understanding of the content at fifth grade. A student scoring at the Meets the Standards level *generally* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences.	Overall student performance in science reflects *high academic* performance on the standards and *a thorough* understanding of the content at fifth grade. A student scoring at the Exceeds the Standards level *consistently* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences.
A student at this level ***inconsistently***:	A student at this level ***generally***:	A student at this level ***consistently***:
• Identifies testable questions. • Identifies factors that may impact an investigation. • Identifies appropriate selection and use of scientific equipment. • Develops a reasonable explanation based on collected data. • Identifies physical properties of matter. • Identifies forces on motion. • Recognizes that energy transfers. • Identifies characteristics of living and nonliving things. • Identifies inherited characteristics and life cycle of living things. • Identifies components of an ecosystem. • Identifies adaptations made by plants and animals to survive. • Identifies changes of objects in the sky. • Identifies Earth's materials and structure. • Identifies energy sources on Earth. • Identifies changes in Earth's surface.	• Identifies testable questions. • Identifies factors that may impact an investigation. • Identifies appropriate selection and use of scientific equipment. • Develops a reasonable explanation based on collected data. • Describe the physical properties of matter and its changes. • Identifies the influence of forces on motion. • Identifies signs of energy transfer. • Compares the characteristics of living and nonliving things. • Identifies variations of inherited characteristics and life cycles. • Describes relationships within an ecosystem. • Describes changes in organisms over time. • Describes characteristics, patterns, and changes of objects in the sky. • Describes Earth's materials, structure, and processes. • Describes the effects of energy changes on Earth. • Describes changes in Earth's surface.	• Identifies testable questions. • Identifies factors that may impact an investigation. • Identifies appropriate selection and use of scientific equipment. • Develops a reasonable explanation based on collected data. • Compares physical properties of matter. • Compares the influence of forces on motion. • Compares energy transfers. • Compares how parts of organisms function to meet basic needs. • Compares variations of inherited characteristics and life cycles. • Compares relationships within an ecosystem. • Compares changes in organisms over time. • Compares characteristics, patterns, and changes of objects in the sky. • Compares Earth's materials, structure, and processes. • Compares the effects of energy changes on Earth. • Compares changes in Earth's surface.

Nebraska State Accountability-Science (NeSA-S) Performance Level Descriptors

Grade 8

Below the Standards	Meets the Standards	Exceeds the Standards
Overall student performance in science reflects *unsatisfactory* performance on the standards and *insufficient* understanding of the content at eighth grade. A student scoring at the Below the Standards level *inconsistently* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences. A student at this level ***inconsistently***: • Identifies testable questions that lead to predictions and scientific investigations. • Identifies and controls variables that impact a scientific investigation. • Identifies appropriate selection and use of scientific equipment. • Develops logical inferences based on collected data and accounts for non-relevant information. • Analyzes investigations for quality, accuracy, and relevancy. • Identifies the particulate nature of matter. • Identifies forces and motion. • Identifies energy systems. • Identifies structure of living organisms. • Identifies types of reproduction. • Identifies components of an ecosystem. • Identifies characteristic of organisms. • Identifies components of the solar system. • Identifies Earth's structure and processes. • Identifies energy in Earth systems. • Identifies changes in Earth over time.	Overall student performance in science reflects *satisfactory* performance on the standards and *sufficient* understanding of the content at eighth grade. A student scoring at the Meets the Standards level *generally* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences. A student at this level ***generally***: • Identifies testable questions that lead to predictions and scientific investigations. • Identifies and controls variables that impact a scientific investigation. • Identifies appropriate selection and use of scientific equipment. • Develops logical inferences based on collected data and accounts for non-relevant information. • Analyzes investigations for quality, accuracy, and relevancy. • Describes the particulate nature of matter including physical and chemical interactions. • Describes forces and motion. • Describes how energy systems and matter interact. • Describes the structure and function of living organisms. • Describes the relationship between reproduction and heredity. • Describes populations and ecosystems. • Identifies characteristics of organisms that help them survive. • Describes Earth and the solar system. • Describes Earth's structure, systems, and processes. • Describes energy in Earth's system. • Describes changes in Earth over time.	Overall student performance in science reflects *high academic* performance on the standards and *a thorough* understanding of the content at eighth grade. A student scoring at the Exceeds the Standards level *consistently* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences. A student at this level ***consistently***: • Identifies testable questions that lead to predictions and scientific investigations. • Identifies and controls variables that impact a scientific investigation. • Identifies appropriate selection and use of scientific equipment. • Develops logical inferences based on collected data and accounts for non-relevant information. • Analyzes investigations for quality, accuracy, and relevancy. • Describes the particulate nature of matter by comparing and contrasting physical and chemical interactions. • Predicts the impact of balanced and unbalanced forces acting on objects. • Evaluates interactions between energy and matter. • Evaluates the interactions between structure and function of living organisms. • Describes the relationship between reproduction and heredity. • Analyzes interactions between populations and ecosystems. • Evaluates survival of organisms based on characteristics. • Analyzes interactions between Earth and the solar system. • Analyzes interactions among Earth's structure, systems, and processes. • Analyzes energy's impact on Earth systems. • Analyzes changes in Earth over time

Nebraska State Accountability-Science (NeSA-S) Performance Level Descriptors

Grade 11

Below the Standards	Meets the Standards	Exceeds the Standards
Overall student performance in science reflects *unsatisfactory* performance on the standards and *insufficient* understanding of the content at eleventh grade. A student scoring at the Below the Standards level *inconsistently* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences. A student at this level ***inconsistently***: • Identifies a testable hypothesis that guides a scientific investigation. • Identifies and manages variables and constraints. • Identifies appropriate selection and use of scientific equipment. • Analyzes and interprets data and evaluates models and explanations. • Evaluates scientific investigations. • Identifies matter in terms of its structure and composition. • Identifies field forces. • Identifies energy systems in matter. • Identifies organic molecules, sub-cellular structures, and cellular functions. • Identifies DNA and its role in heredity. • Identifies the flow of energy between organisms and their environment. • Identifies types of adaptations necessary for survival. • Identifies components of the universe. • Identifies the relationships between Earth's structure and processes. • Identifies relationships between sources of energy and Earth's systems. • Identifies the Law of Superposition.	Overall student performance in science reflects *satisfactory* performance on the standards and *sufficient* understanding of the content at eleventh grade. A student scoring at the Meets the Standards level *generally* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences. A student at this level ***generally***: • Identifies a testable hypothesis that guides a scientific investigation. • Identifies and manages variables and constraints. • Identifies appropriate selection and use of scientific equipment. • Analyzes and interprets data and evaluates models and explanations. • Evaluates scientific investigations. • Describes matter in terms of its structure, composition, and conservation. • Describes the nature of field forces and their interactions with matter. • Describes energy systems relating to the conservation and interaction of energy and matter. • Describes the chemical basis of the growth, development, and maintenance of cells. • Describes the molecular basis of reproduction and heredity. • Describes, on a molecular level, the cycling of matter and the flow of energy between organisms and their environment. • Describes the theory of biological evolution. • Describes the known universe. • Investigates the relationships among Earth's structure, systems, and processes. • Describes the relationships among the sources of energy and their effects on Earth's systems. • Explains the history and evolution of Earth.	Overall student performance in science reflects *high academic* performance on the standards and *a thorough* understanding of the content at eleventh grade. A student scoring at the Exceeds the Standards level *consistently* draws on a broad range of scientific knowledge and skills in the areas of inquiry, physical, life, and Earth/space sciences. A student at this level ***consistently***: • Identifies a testable hypothesis that guides a scientific investigation. • Identifies and manages variables and constraints. • Identifies appropriate selection and use of scientific equipment. • Analyzes and interprets data and evaluates models and explanations. • Evaluates scientific investigations. • Analyzes structure, composition, and conservation of matter. • Analyzes interactions between field forces and matter. • Analyzes interactions between energy systems and matter. • Analyzes the chemical basis of the growth, development, and maintenance of cells. • Analyzes the molecular basis of reproduction and heredity. • Analyzes the cycling of matter and the flow of energy between organisms and their environment. • Analyzes the theory of biological evolution and the diversity of life. • Analyzes the formation of the universe. • Analyzes the relationships among Earth's structure, systems, and processes. • Analyzes the relationships between sources of energy and their effects on Earth's systems. • Analyzes the history and evolution of Earth.

Appendix P: Reading Raw-to-Scale Conversion Tables and Distributions of Ability

The charts are simple displays of Scale Score, Raw Score, and percentile rank. The raw score and percentile rank for any Scale Score can be read directly from chart.

The proformance levels *Meets Standards* begins at a Scale Score of 85 and *Exceeds Standards* begins at 135. *Below Standards* is a Scale Score of 84 and below.

The table is a traditional table that was used to create the chart. This table would be used to retrieve the Scale Score or percentile rank for a given raw score. It also includes counts and percentages at each score.

Grade 3

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	3	Read	0	2	0.0	2	0.0	1	1	52
Spr 2012	3	Read	1	0	0.0	2	0.0	1	1	29
Spr 2012	3	Read	2	0	0.0	2	0.0	1	1	21
Spr 2012	3	Read	3	0	0.0	2	0.0	1	1	17
Spr 2012	3	Read	4	0	0.0	2	0.0	1	6	15
Spr 2012	3	Read	5	3	0.0	5	0.0	1	13	14
Spr 2012	3	Read	6	2	0.0	7	0.0	1	19	13
Spr 2012	3	Read	7	13	0.1	20	0.1	1	25	12
Spr 2012	3	Read	8	22	0.1	42	0.2	1	29	11
Spr 2012	3	Read	9	35	0.2	77	0.3	1	34	11
Spr 2012	3	Read	10	52	0.2	129	0.6	1	38	11
Spr 2012	3	Read	11	86	0.4	215	1.0	1	42	10
Spr 2012	3	Read	12	144	0.6	359	1.6	1	45	10
Spr 2012	3	Read	13	173	0.8	532	2.4	2	49	10
Spr 2012	3	Read	14	181	0.8	713	3.2	3	52	10
Spr 2012	3	Read	15	235	1.1	948	4.3	4	55	9
Spr 2012	3	Read	16	253	1.1	1201	5.4	5	58	9
Spr 2012	3	Read	17	297	1.3	1498	6.8	6	61	9
Spr 2012	3	Read	18	346	1.6	1844	8.3	8	64	9
Spr 2012	3	Read	19	358	1.6	2202	9.9	9	67	9
Spr 2012	3	Read	20	400	1.8	2602	11.7	11	70	9
Spr 2012	3	Read	21	449	2.0	3051	13.8	13	73	9
Spr 2012	3	Read	22	484	2.2	3535	16.0	15	76	9
Spr 2012	3	Read	23	505	2.3	4040	18.2	17	78	9
Spr 2012	3	Read	24	556	2.5	4596	20.7	19	81	9
Spr 2012	3	Read	25	560	2.5	5156	23.3	22	84	9
Spr 2012	3	Read	26	632	2.9	5788	26.1	25	87	9

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	3	Read	27	713	3.2	6501	29.3	28	90	9
Spr 2012	3	Read	28	753	3.4	7254	32.7	31	93	9
Spr 2012	3	Read	29	746	3.4	8000	36.1	34	96	9
Spr 2012	3	Read	30	809	3.7	8809	39.8	38	99	9
Spr 2012	3	Read	31	892	4.0	9701	43.8	42	102	10
Spr 2012	3	Read	32	940	4.2	10641	48.0	46	105	10
Spr 2012	3	Read	33	989	4.5	11630	52.5	50	109	10
Spr 2012	3	Read	34	1054	4.8	12684	57.2	55	112	10
Spr 2012	3	Read	35	1033	4.7	13717	61.9	60	116	11
Spr 2012	3	Read	36	1117	5.0	14834	66.9	64	120	11
Spr 2012	3	Read	37	1164	5.3	15998	72.2	70	124	11
Spr 2012	3	Read	38	1219	5.5	17217	77.7	75	129	12
Spr 2012	3	Read	39	1142	5.2	18359	82.9	80	135	13
Spr 2012	3	Read	40	1113	5.0	19472	87.9	85	141	14
Spr 2012	3	Read	41	960	4.3	20432	92.2	90	148	15
Spr 2012	3	Read	42	816	3.7	21248	95.9	94	157	17
Spr 2012	3	Read	43	528	2.4	21776	98.3	97	170	21
Spr 2012	3	Read	44	292	1.3	22068	99.6	99	190	29
Spr 2012	3	Read	45	89	0.4	22157	100.0	99	200	52

Grade 4

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	4	Read	0	0	0.0	0	0.0	0	1	67
Spr 2012	4	Read	1	0	0.0	0	0.0	0	1	37
Spr 2012	4	Read	2	1	0.0	1	0.0	1	1	27
Spr 2012	4	Read	3	0	0.0	1	0.0	1	1	22
Spr 2012	4	Read	4	0	0.0	1	0.0	1	1	19
Spr 2012	4	Read	5	3	0.0	4	0.0	1	1	18
Spr 2012	4	Read	6	6	0.0	10	0.0	1	6	16
Spr 2012	4	Read	7	15	0.1	25	0.1	1	13	15
Spr 2012	4	Read	8	37	0.2	62	0.3	1	19	15
Spr 2012	4	Read	9	63	0.3	125	0.6	1	25	14
Spr 2012	4	Read	10	84	0.4	209	1.0	1	30	14
Spr 2012	4	Read	11	109	0.5	318	1.4	1	35	13
Spr 2012	4	Read	12	164	0.7	482	2.2	2	40	13
Spr 2012	4	Read	13	187	0.9	669	3.0	3	44	13
Spr 2012	4	Read	14	246	1.1	915	4.2	4	48	12
Spr 2012	4	Read	15	259	1.2	1174	5.3	5	52	12
Spr 2012	4	Read	16	327	1.5	1501	6.8	6	56	12

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	4	Read	17	348	1.6	1849	8.4	8	60	12
Spr 2012	4	Read	18	404	1.8	2253	10.3	9	64	12
Spr 2012	4	Read	19	435	2.0	2688	12.2	11	68	12
Spr 2012	4	Read	20	501	2.3	3189	14.5	13	71	11
Spr 2012	4	Read	21	526	2.4	3715	16.9	16	75	11
Spr 2012	4	Read	22	590	2.7	4305	19.6	18	78	11
Spr 2012	4	Read	23	637	2.9	4942	22.5	21	82	11
Spr 2012	4	Read	24	677	3.1	5619	25.6	24	86	11
Spr 2012	4	Read	25	766	3.5	6385	29.1	27	89	11
Spr 2012	4	Read	26	789	3.6	7174	32.6	31	93	12
Spr 2012	4	Read	27	841	3.8	8015	36.5	35	96	12
Spr 2012	4	Read	28	901	4.1	8916	40.6	39	100	12
Spr 2012	4	Read	29	945	4.3	9861	44.9	43	104	12
Spr 2012	4	Read	30	975	4.4	10836	49.3	47	108	12
Spr 2012	4	Read	31	957	4.4	11793	53.7	51	112	12
Spr 2012	4	Read	32	983	4.5	12776	58.1	56	116	12
Spr 2012	4	Read	33	1011	4.6	13787	62.7	60	120	13
Spr 2012	4	Read	34	1081	4.9	14868	67.7	65	125	13
Spr 2012	4	Read	35	1054	4.8	15922	72.5	70	130	14
Spr 2012	4	Read	36	937	4.3	16859	76.7	75	135	14
Spr 2012	4	Read	37	993	4.5	17852	81.2	79	141	15
Spr 2012	4	Read	38	901	4.1	18753	85.3	83	147	15
Spr 2012	4	Read	39	858	3.9	19611	89.2	87	154	16
Spr 2012	4	Read	40	772	3.5	20383	92.8	91	162	18
Spr 2012	4	Read	41	607	2.8	20990	95.5	94	171	19
Spr 2012	4	Read	42	478	2.2	21468	97.7	97	183	22
Spr 2012	4	Read	43	311	1.4	21779	99.1	98	199	27
Spr 2012	4	Read	44	148	0.7	21927	99.8	99	200	37
Spr 2012	4	Read	45	48	0.2	21975	100.0	99	200	67

Grade 5

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	5	Read	0	0	0.0	0	0.0	0	1	72
Spr 2012	5	Read	1	0	0.0	0	0.0	0	1	40
Spr 2012	5	Read	2	0	0.0	0	0.0	0	1	29
Spr 2012	5	Read	3	0	0.0	0	0.0	0	1	24
Spr 2012	5	Read	4	0	0.0	0	0.0	0	1	21
Spr 2012	5	Read	5	2	0.0	2	0.0	1	1	19
Spr 2012	5	Read	6	0	0.0	2	0.0	1	1	18

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	5	Read	7	11	0.1	13	0.1	1	1	17
Spr 2012	5	Read	8	22	0.1	35	0.2	1	4	16
Spr 2012	5	Read	9	43	0.2	78	0.4	1	10	15
Spr 2012	5	Read	10	65	0.3	143	0.7	1	16	15
Spr 2012	5	Read	11	80	0.4	223	1.0	1	21	14
Spr 2012	5	Read	12	109	0.5	332	1.5	1	26	14
Spr 2012	5	Read	13	144	0.7	476	2.2	2	31	14
Spr 2012	5	Read	14	212	1.0	688	3.2	3	35	13
Spr 2012	5	Read	15	217	1.0	905	4.2	4	40	13
Spr 2012	5	Read	16	236	1.1	1141	5.3	5	44	13
Spr 2012	5	Read	17	254	1.2	1395	6.4	6	48	13
Spr 2012	5	Read	18	282	1.3	1677	7.8	7	52	13
Spr 2012	5	Read	19	326	1.5	2003	9.3	9	56	12
Spr 2012	5	Read	20	363	1.7	2366	10.9	10	60	12
Spr 2012	5	Read	21	384	1.8	2750	12.7	12	64	12
Spr 2012	5	Read	22	410	1.9	3160	14.6	14	67	12
Spr 2012	5	Read	23	434	2.0	3594	16.6	16	71	12
Spr 2012	5	Read	24	537	2.5	4131	19.1	18	75	12
Spr 2012	5	Read	25	505	2.3	4636	21.4	20	79	12
Spr 2012	5	Read	26	608	2.8	5244	24.2	23	83	12
Spr 2012	5	Read	27	639	3.0	5883	27.2	26	86	12
Spr 2012	5	Read	28	654	3.0	6537	30.2	29	90	12
Spr 2012	5	Read	29	728	3.4	7265	33.6	32	94	12
Spr 2012	5	Read	30	740	3.4	8005	37.0	35	98	13
Spr 2012	5	Read	31	809	3.7	8814	40.7	39	102	13
Spr 2012	5	Read	32	879	4.1	9693	44.8	43	106	13
Spr 2012	5	Read	33	859	4.0	10552	48.8	47	110	13
Spr 2012	5	Read	34	883	4.1	11435	52.9	51	115	13
Spr 2012	5	Read	35	947	4.4	12382	57.2	55	119	14
Spr 2012	5	Read	36	942	4.4	13324	61.6	59	124	14
Spr 2012	5	Read	37	975	4.5	14299	66.1	64	129	14
Spr 2012	5	Read	38	960	4.4	15259	70.5	68	135	15
Spr 2012	5	Read	39	994	4.6	16253	75.1	73	140	15
Spr 2012	5	Read	40	956	4.4	17209	79.5	77	146	16
Spr 2012	5	Read	41	953	4.4	18162	83.9	82	153	17
Spr 2012	5	Read	42	865	4.0	19027	87.9	86	161	18
Spr 2012	5	Read	43	817	3.8	19844	91.7	90	169	19
Spr 2012	5	Read	44	654	3.0	20498	94.7	93	180	21
Spr 2012	5	Read	45	487	2.3	20985	97.0	96	193	24
Spr 2012	5	Read	46	364	1.7	21349	98.7	98	200	29
Spr 2012	5	Read	47	221	1.0	21570	99.7	99	200	40

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	5	Read	48	65	0.3	21635	100.0	99	200	72

Grade 6

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	6	Read	0	2	0	2	0	1	1	69
Spr 2012	6	Read	1	1	0	3	0	1	1	38
Spr 2012	6	Read	2	1	0	4	0	1	1	28
Spr 2012	6	Read	3	0	0	4	0	1	1	23
Spr 2012	6	Read	4	0	0	4	0	1	1	20
Spr 2012	6	Read	5	2	0	6	0	1	1	18
Spr 2012	6	Read	6	8	0	14	0.1	1	1	17
Spr 2012	6	Read	7	4	0	18	0.1	1	1	16
Spr 2012	6	Read	8	21	0.1	39	0.2	1	4	15
Spr 2012	6	Read	9	27	0.1	66	0.3	1	10	15
Spr 2012	6	Read	10	58	0.3	124	0.6	1	15	14
Spr 2012	6	Read	11	79	0.4	203	0.9	1	20	14
Spr 2012	6	Read	12	116	0.5	319	1.5	1	25	13
Spr 2012	6	Read	13	118	0.6	437	2	2	30	13
Spr 2012	6	Read	14	157	0.7	594	2.8	2	34	13
Spr 2012	6	Read	15	173	0.8	767	3.6	3	38	12
Spr 2012	6	Read	16	182	0.9	949	4.4	4	42	12
Spr 2012	6	Read	17	208	1	1157	5.4	5	46	12
Spr 2012	6	Read	18	273	1.3	1430	6.7	6	50	12
Spr 2012	6	Read	19	313	1.5	1743	8.1	7	54	12
Spr 2012	6	Read	20	314	1.5	2057	9.6	9	57	12
Spr 2012	6	Read	21	357	1.7	2414	11.3	10	61	12
Spr 2012	6	Read	22	394	1.8	2808	13.1	12	65	12
Spr 2012	6	Read	23	471	2.2	3279	15.3	14	68	12
Spr 2012	6	Read	24	441	2.1	3720	17.4	16	72	12
Spr 2012	6	Read	25	507	2.4	4227	19.8	19	76	12
Spr 2012	6	Read	26	527	2.5	4754	22.2	21	79	12
Spr 2012	6	Read	27	621	2.9	5375	25.1	24	83	12
Spr 2012	6	Read	28	645	3	6020	28.1	27	87	12
Spr 2012	6	Read	29	689	3.2	6709	31.4	30	91	12
Spr 2012	6	Read	30	727	3.4	7436	34.8	33	95	12
Spr 2012	6	Read	31	786	3.7	8222	38.4	37	98	12
Spr 2012	6	Read	32	847	4	9069	42.4	40	103	12
Spr 2012	6	Read	33	902	4.2	9971	46.6	45	107	13
Spr 2012	6	Read	34	935	4.4	10906	51	49	111	13
Spr 2012	6	Read	35	961	4.5	11867	55.5	53	116	13

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	6	Read	36	1023	4.8	12890	60.3	58	120	13
Spr 2012	6	Read	37	955	4.5	13845	64.7	62	125	14
Spr 2012	6	Read	38	1043	4.9	14888	69.6	67	130	14
Spr 2012	6	Read	39	939	4.4	15827	74	72	136	15
Spr 2012	6	Read	40	1005	4.7	16832	78.7	76	142	15
Spr 2012	6	Read	41	1025	4.8	17857	83.5	81	149	16
Spr 2012	6	Read	42	881	4.1	18738	87.6	86	156	17
Spr 2012	6	Read	43	792	3.7	19530	91.3	89	165	19
Spr 2012	6	Read	44	696	3.3	20226	94.6	93	175	20
Spr 2012	6	Read	45	517	2.4	20743	97	96	187	23
Spr 2012	6	Read	46	376	1.8	21119	98.7	98	200	28
Spr 2012	6	Read	47	204	1	21323	99.7	99	200	39
Spr 2012	6	Read	48	68	0.3	21391	100	99	200	69

Grade 7

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	7	Read	0	0	0.0	0	0.0	0	1	71
Spr 2012	7	Read	1	1	0.0	1	0.0	1	1	39
Spr 2012	7	Read	2	0	0.0	1	0.0	1	1	28
Spr 2012	7	Read	3	0	0.0	1	0.0	1	1	23
Spr 2012	7	Read	4	2	0.0	3	0.0	1	1	21
Spr 2012	7	Read	5	2	0.0	5	0.0	1	1	19
Spr 2012	7	Read	6	4	0.0	9	0.0	1	1	17
Spr 2012	7	Read	7	13	0.1	22	0.1	1	2	16
Spr 2012	7	Read	8	13	0.1	35	0.2	1	8	16
Spr 2012	7	Read	9	36	0.2	71	0.3	1	14	15
Spr 2012	7	Read	10	55	0.3	126	0.6	1	20	14
Spr 2012	7	Read	11	70	0.3	196	0.9	1	25	14
Spr 2012	7	Read	12	121	0.6	317	1.5	1	30	14
Spr 2012	7	Read	13	147	0.7	464	2.2	2	35	13
Spr 2012	7	Read	14	185	0.9	649	3.1	3	39	13
Spr 2012	7	Read	15	200	1.0	849	4.0	4	44	13
Spr 2012	7	Read	16	242	1.2	1091	5.2	5	48	13
Spr 2012	7	Read	17	258	1.2	1349	6.4	6	52	12
Spr 2012	7	Read	18	292	1.4	1641	7.8	7	56	12
Spr 2012	7	Read	19	346	1.6	1987	9.5	9	60	12
Spr 2012	7	Read	20	361	1.7	2348	11.2	10	63	12
Spr 2012	7	Read	21	432	2.1	2780	13.3	12	67	12
Spr 2012	7	Read	22	451	2.1	3231	15.4	14	71	12
Spr 2012	7	Read	23	455	2.2	3686	17.6	16	75	12

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	7	Read	24	513	2.4	4199	20.0	19	78	12
Spr 2012	7	Read	25	485	2.3	4684	22.3	21	82	12
Spr 2012	7	Read	26	549	2.6	5233	24.9	24	86	12
Spr 2012	7	Read	27	613	2.9	5846	27.9	26	89	12
Spr 2012	7	Read	28	649	3.1	6495	31.0	29	93	12
Spr 2012	7	Read	29	682	3.3	7177	34.2	33	97	12
Spr 2012	7	Read	30	696	3.3	7873	37.5	36	101	12
Spr 2012	7	Read	31	759	3.6	8632	41.1	39	105	12
Spr 2012	7	Read	32	801	3.8	9433	45.0	43	109	13
Spr 2012	7	Read	33	844	4.0	10277	49.0	47	113	13
Spr 2012	7	Read	34	897	4.3	11174	53.3	51	117	13
Spr 2012	7	Read	35	891	4.2	12065	57.5	55	122	13
Spr 2012	7	Read	36	890	4.2	12955	61.8	60	126	14
Spr 2012	7	Read	37	944	4.5	13899	66.3	64	131	14
Spr 2012	7	Read	38	891	4.2	14790	70.5	68	136	14
Spr 2012	7	Read	39	1012	4.8	15802	75.3	73	142	15
Spr 2012	7	Read	40	953	4.5	16755	79.9	78	148	16
Spr 2012	7	Read	41	921	4.4	17676	84.3	82	155	16
Spr 2012	7	Read	42	812	3.9	18488	88.1	86	162	17
Spr 2012	7	Read	43	756	3.6	19244	91.7	90	170	19
Spr 2012	7	Read	44	678	3.2	19922	95.0	93	180	21
Spr 2012	7	Read	45	480	2.3	20402	97.3	96	193	23
Spr 2012	7	Read	46	351	1.7	20753	98.9	98	200	28
Spr 2012	7	Read	47	177	0.8	20930	99.8	99	200	39
Spr 2012	7	Read	48	47	0.2	20977	100.0	99	200	71

Grade 8

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	8	Read	0	2	0.0	2	0.0	1	1	68
Spr 2012	8	Read	1	2	0.0	4	0.0	1	1	38
Spr 2012	8	Read	2	0	0.0	4	0.0	1	1	27
Spr 2012	8	Read	3	0	0.0	4	0.0	1	1	22
Spr 2012	8	Read	4	1	0.0	5	0.0	1	1	20
Spr 2012	8	Read	5	1	0.0	6	0.0	1	1	18
Spr 2012	8	Read	6	2	0.0	8	0.0	1	1	17
Spr 2012	8	Read	7	11	0.1	19	0.1	1	1	16
Spr 2012	8	Read	8	9	0.0	28	0.1	1	6	15
Spr 2012	8	Read	9	17	0.1	45	0.2	1	12	14
Spr 2012	8	Read	10	50	0.2	95	0.5	1	17	14

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	8	Read	11	64	0.3	159	0.8	1	22	13
Spr 2012	8	Read	12	98	0.5	257	1.2	1	26	13
Spr 2012	8	Read	13	122	0.6	379	1.8	2	31	13
Spr 2012	8	Read	14	162	0.8	541	2.6	2	35	12
Spr 2012	8	Read	15	166	0.8	707	3.4	3	39	12
Spr 2012	8	Read	16	211	1.0	918	4.4	4	43	12
Spr 2012	8	Read	17	221	1.1	1139	5.5	5	46	12
Spr 2012	8	Read	18	265	1.3	1404	6.8	6	50	12
Spr 2012	8	Read	19	291	1.4	1695	8.2	7	54	11
Spr 2012	8	Read	20	295	1.4	1990	9.6	9	57	11
Spr 2012	8	Read	21	348	1.7	2338	11.3	10	61	11
Spr 2012	8	Read	22	359	1.7	2697	13.0	12	64	11
Spr 2012	8	Read	23	406	2.0	3103	14.9	14	67	11
Spr 2012	8	Read	24	417	2.0	3520	16.9	16	71	11
Spr 2012	8	Read	25	449	2.2	3969	19.1	18	74	11
Spr 2012	8	Read	26	544	2.6	4513	21.7	20	77	11
Spr 2012	8	Read	27	572	2.8	5085	24.5	23	81	11
Spr 2012	8	Read	28	569	2.7	5654	27.2	26	84	11
Spr 2012	8	Read	29	581	2.8	6235	30.0	29	88	11
Spr 2012	8	Read	30	662	3.2	6897	33.2	32	91	11
Spr 2012	8	Read	31	622	3.0	7519	36.2	35	94	11
Spr 2012	8	Read	32	716	3.4	8235	39.7	38	98	12
Spr 2012	8	Read	33	774	3.7	9009	43.4	42	102	12
Spr 2012	8	Read	34	854	4.1	9863	47.5	45	105	12
Spr 2012	8	Read	35	882	4.2	10745	51.7	50	109	12
Spr 2012	8	Read	36	902	4.3	11647	56.1	54	113	12
Spr 2012	8	Read	37	939	4.5	12586	60.6	58	117	12
Spr 2012	8	Read	38	985	4.7	13571	65.3	63	122	13
Spr 2012	8	Read	39	931	4.5	14502	69.8	68	126	13
Spr 2012	8	Read	40	917	4.4	15419	74.2	72	131	14
Spr 2012	8	Read	41	933	4.5	16352	78.7	76	136	14
Spr 2012	8	Read	42	891	4.3	17243	83.0	81	142	15
Spr 2012	8	Read	43	864	4.2	18107	87.2	85	148	16
Spr 2012	8	Read	44	780	3.8	18887	90.9	89	155	17
Spr 2012	8	Read	45	660	3.2	19547	94.1	93	163	18
Spr 2012	8	Read	46	536	2.6	20083	96.7	95	172	20
Spr 2012	8	Read	47	359	1.7	20442	98.4	98	184	22
Spr 2012	8	Read	48	214	1.0	20656	99.5	99	200	27
Spr 2012	8	Read	49	91	0.4	20747	99.9	99	200	38
Spr 2012	8	Read	50	21	0.1	20768	100.0	99	200	68

Grade 11

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	11	Read	0	1	0.0	1	0.0	1	1	73
Spr 2012	11	Read	1	1	0.0	2	0.0	1	1	40
Spr 2012	11	Read	2	0	0.0	2	0.0	1	1	29
Spr 2012	11	Read	3	0	0.0	2	0.0	1	1	24
Spr 2012	11	Read	4	1	0.0	3	0.0	1	1	21
Spr 2012	11	Read	5	8	0.0	11	0.1	1	1	19
Spr 2012	11	Read	6	5	0.0	16	0.1	1	1	18
Spr 2012	11	Read	7	20	0.1	36	0.2	1	1	17
Spr 2012	11	Read	8	39	0.2	75	0.4	1	1	16
Spr 2012	11	Read	9	64	0.3	139	0.7	1	1	15
Spr 2012	11	Read	10	71	0.3	210	1.0	1	5	15
Spr 2012	11	Read	11	131	0.6	341	1.6	1	10	14
Spr 2012	11	Read	12	182	0.9	523	2.5	2	15	14
Spr 2012	11	Read	13	229	1.1	752	3.6	3	20	14
Spr 2012	11	Read	14	249	1.2	1001	4.8	4	24	13
Spr 2012	11	Read	15	249	1.2	1250	6.0	5	29	13
Spr 2012	11	Read	16	301	1.4	1551	7.4	7	33	13
Spr 2012	11	Read	17	307	1.5	1858	8.9	8	37	13
Spr 2012	11	Read	18	318	1.5	2176	10.4	10	41	13
Spr 2012	11	Read	19	342	1.6	2518	12.1	11	45	12
Spr 2012	11	Read	20	364	1.7	2882	13.8	13	49	12
Spr 2012	11	Read	21	384	1.8	3266	15.7	15	53	12
Spr 2012	11	Read	22	412	2.0	3678	17.6	17	57	12
Spr 2012	11	Read	23	450	2.2	4128	19.8	19	60	12
Spr 2012	11	Read	24	476	2.3	4604	22.1	21	64	12
Spr 2012	11	Read	25	513	2.5	5117	24.5	23	68	12
Spr 2012	11	Read	26	513	2.5	5630	27.0	26	71	12
Spr 2012	11	Read	27	545	2.6	6175	29.6	28	75	12
Spr 2012	11	Read	28	573	2.7	6748	32.3	31	79	12
Spr 2012	11	Read	29	621	3.0	7369	35.3	34	83	12
Spr 2012	11	Read	30	642	3.1	8011	38.4	37	86	12
Spr 2012	11	Read	31	650	3.1	8661	41.5	40	90	12
Spr 2012	11	Read	32	683	3.3	9344	44.8	43	94	13
Spr 2012	11	Read	33	689	3.3	10033	48.1	46	98	13
Spr 2012	11	Read	34	738	3.5	10771	51.6	50	102	13
Spr 2012	11	Read	35	772	3.7	11543	55.3	53	106	13
Spr 2012	11	Read	36	791	3.8	12334	59.1	57	111	13
Spr 2012	11	Read	37	798	3.8	13132	62.9	61	115	14
Spr 2012	11	Read	38	796	3.8	13928	66.7	65	120	14
Spr 2012	11	Read	39	834	4.0	14762	70.7	69	125	14

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	11	Read	40	852	4.1	15614	74.8	73	131	15
Spr 2012	11	Read	41	829	4.0	16443	78.8	77	136	15
Spr 2012	11	Read	42	789	3.8	17232	82.6	81	142	16
Spr 2012	11	Read	43	763	3.7	17995	86.2	84	149	17
Spr 2012	11	Read	44	728	3.5	18723	89.7	88	157	18
Spr 2012	11	Read	45	634	3.0	19357	92.8	91	166	19
Spr 2012	11	Read	46	588	2.8	19945	95.6	94	176	21
Spr 2012	11	Read	47	458	2.2	20403	97.8	97	189	24
Spr 2012	11	Read	48	296	1.4	20699	99.2	98	200	29
Spr 2012	11	Read	49	135	0.6	20834	99.8	99	200	41
Spr 2012	11	Read	50	34	0.2	20868	100.0	99	200	73

Appendix Q: Mathematics Raw-to-Scale Conversion Tables and Distributions of Ability

The charts are simple displays of Scale Score, Raw Score, and percentile rank. The raw score and percentile rank for any Scale Score can be read directly from chart.

The proformance levels *Meets Standards* begins at a Scale Score of 85 and *Exceeds Standards* begins at 135. *Below Standards* is a Scale Score of 84 and below.

The table is a traditional table that was used to create the chart. This table would be used to retrieve the Scale Score or percentile rank for a given raw score. It also includes counts and percentages at each score.

Grade 3

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	3	Math	0	0	0.0	0	0.0	0	1	54
Spr 2012	3	Math	1	0	0.0	0	0.0	0	1	30
Spr 2012	3	Math	2	0	0.0	0	0.0	0	1	21
Spr 2012	3	Math	3	1	0.0	1	0.0	1	1	18
Spr 2012	3	Math	4	0	0.0	1	0.0	1	1	16
Spr 2012	3	Math	5	2	0.0	3	0.0	1	2	14
Spr 2012	3	Math	6	2	0.0	5	0.0	1	8	13
Spr 2012	3	Math	7	10	0.0	15	0.1	1	13	12
Spr 2012	3	Math	8	11	0.0	26	0.1	1	18	12
Spr 2012	3	Math	9	35	0.2	61	0.3	1	23	11
Spr 2012	3	Math	10	65	0.3	126	0.6	1	27	11
Spr 2012	3	Math	11	91	0.4	217	1.0	1	31	10
Spr 2012	3	Math	12	118	0.5	335	1.5	1	34	10
Spr 2012	3	Math	13	151	0.7	486	2.2	2	38	10
Spr 2012	3	Math	14	158	0.7	644	2.9	3	41	10
Spr 2012	3	Math	15	206	0.9	850	3.8	3	44	9
Spr 2012	3	Math	16	214	1.0	1064	4.8	4	47	9
Spr 2012	3	Math	17	234	1.1	1298	5.8	5	50	9
Spr 2012	3	Math	18	265	1.2	1563	7.0	6	53	9
Spr 2012	3	Math	19	270	1.2	1833	8.3	8	55	9
Spr 2012	3	Math	20	323	1.5	2156	9.7	9	58	9
Spr 2012	3	Math	21	305	1.4	2461	11.1	10	61	9
Spr 2012	3	Math	22	337	1.5	2798	12.6	12	63	9
Spr 2012	3	Math	23	374	1.7	3172	14.3	13	66	9
Spr 2012	3	Math	24	388	1.7	3560	16.0	15	69	9
Spr 2012	3	Math	25	410	1.8	3970	17.9	17	71	9
Spr 2012	3	Math	26	410	1.8	4380	19.7	19	74	9
Spr 2012	3	Math	27	422	1.9	4802	21.6	21	76	9

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	3	Math	28	471	2.1	5273	23.7	23	79	9
Spr 2012	3	Math	29	444	2.0	5717	25.7	25	82	9
Spr 2012	3	Math	30	496	2.2	6213	28.0	27	84	9
Spr 2012	3	Math	31	585	2.6	6798	30.6	29	87	9
Spr 2012	3	Math	32	547	2.5	7345	33.1	32	90	9
Spr 2012	3	Math	33	617	2.8	7962	35.8	34	92	9
Spr 2012	3	Math	34	627	2.8	8589	38.7	37	95	9
Spr 2012	3	Math	35	717	3.2	9306	41.9	40	98	9
Spr 2012	3	Math	36	715	3.2	10021	45.1	44	101	10
Spr 2012	3	Math	37	732	3.3	10753	48.4	47	105	10
Spr 2012	3	Math	38	892	4.0	11645	52.4	50	108	10
Spr 2012	3	Math	39	884	4.0	12529	56.4	54	111	10
Spr 2012	3	Math	40	910	4.1	13439	60.5	58	115	11
Spr 2012	3	Math	41	1002	4.5	14441	65.0	63	119	11
Spr 2012	3	Math	42	953	4.3	15394	69.3	67	124	12
Spr 2012	3	Math	43	1094	4.9	16488	74.2	72	129	12
Spr 2012	3	Math	44	1104	5.0	17592	79.2	77	134	13
Spr 2012	3	Math	45	1074	4.8	18666	84.0	82	140	14
Spr 2012	3	Math	46	1018	4.6	19684	88.6	86	148	16
Spr 2012	3	Math	47	941	4.2	20625	92.8	91	157	18
Spr 2012	3	Math	48	786	3.5	21411	96.4	95	170	21
Spr 2012	3	Math	49	542	2.4	21953	98.8	98	191	30
Spr 2012	3	Math	50	261	1.2	22214	100.0	99	200	54

Grade 4

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	4	Math	0	0	0.0	0	0.0	0	1	51
Spr 2012	4	Math	1	0	0.0	0	0.0	0	1	28
Spr 2012	4	Math	2	0	0.0	0	0.0	0	1	20
Spr 2012	4	Math	3	1	0.0	1	0.0	1	1	17
Spr 2012	4	Math	4	1	0.0	2	0.0	1	1	15
Spr 2012	4	Math	5	0	0.0	2	0.0	1	6	13
Spr 2012	4	Math	6	3	0.0	5	0.0	1	12	12
Spr 2012	4	Math	7	4	0.0	9	0.0	1	17	12
Spr 2012	4	Math	8	13	0.1	22	0.1	1	22	11
Spr 2012	4	Math	9	24	0.1	46	0.2	1	26	10
Spr 2012	4	Math	10	34	0.2	80	0.4	1	29	10
Spr 2012	4	Math	11	58	0.3	138	0.6	1	33	10
Spr 2012	4	Math	12	96	0.4	234	1.1	1	36	9

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	4	Math	13	104	0.5	338	1.5	1	39	9
Spr 2012	4	Math	14	144	0.7	482	2.2	2	42	9
Spr 2012	4	Math	15	175	0.8	657	3.0	3	45	9
Spr 2012	4	Math	16	204	0.9	861	3.9	3	48	9
Spr 2012	4	Math	17	198	0.9	1059	4.8	4	50	8
Spr 2012	4	Math	18	244	1.1	1303	5.9	5	53	8
Spr 2012	4	Math	19	259	1.2	1562	7.1	7	56	8
Spr 2012	4	Math	20	278	1.3	1840	8.4	8	58	8
Spr 2012	4	Math	21	278	1.3	2118	9.6	9	60	8
Spr 2012	4	Math	22	328	1.5	2446	11.1	10	63	8
Spr 2012	4	Math	23	343	1.6	2789	12.7	12	65	8
Spr 2012	4	Math	24	349	1.6	3138	14.2	13	67	8
Spr 2012	4	Math	25	372	1.7	3510	15.9	15	70	8
Spr 2012	4	Math	26	394	1.8	3904	17.7	17	72	8
Spr 2012	4	Math	27	438	2.0	4342	19.7	19	74	8
Spr 2012	4	Math	28	415	1.9	4757	21.6	21	76	8
Spr 2012	4	Math	29	495	2.2	5252	23.8	23	79	8
Spr 2012	4	Math	30	447	2.0	5699	25.9	25	81	8
Spr 2012	4	Math	31	497	2.3	6196	28.1	27	83	8
Spr 2012	4	Math	32	494	2.2	6690	30.4	29	85	8
Spr 2012	4	Math	33	507	2.3	7197	32.7	32	88	8
Spr 2012	4	Math	34	558	2.5	7755	35.2	34	90	8
Spr 2012	4	Math	35	593	2.7	8348	37.9	37	92	8
Spr 2012	4	Math	36	562	2.6	8910	40.4	39	95	8
Spr 2012	4	Math	37	608	2.8	9518	43.2	42	97	8
Spr 2012	4	Math	38	638	2.9	10156	46.1	45	100	8
Spr 2012	4	Math	39	649	2.9	10805	49.0	48	103	9
Spr 2012	4	Math	40	696	3.2	11501	52.2	51	105	9
Spr 2012	4	Math	41	712	3.2	12213	55.4	54	108	9
Spr 2012	4	Math	42	707	3.2	12920	58.6	57	111	9
Spr 2012	4	Math	43	737	3.3	13657	62.0	60	114	9
Spr 2012	4	Math	44	773	3.5	14430	65.5	64	117	10
Spr 2012	4	Math	45	759	3.4	15189	68.9	67	121	10
Spr 2012	4	Math	46	814	3.7	16003	72.6	71	125	10
Spr 2012	4	Math	47	832	3.8	16835	76.4	75	129	11
Spr 2012	4	Math	48	808	3.7	17643	80.1	78	133	12
Spr 2012	4	Math	49	821	3.7	18464	83.8	82	138	12
Spr 2012	4	Math	50	843	3.8	19307	87.6	86	144	13
Spr 2012	4	Math	51	795	3.6	20102	91.2	89	151	15
Spr 2012	4	Math	52	700	3.2	20802	94.4	93	160	17
Spr 2012	4	Math	53	579	2.6	21381	97.0	96	172	20

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	4	Math	54	453	2.1	21834	99.1	98	192	28
Spr 2012	4	Math	55	199	0.9	22033	100.0	99	200	51

Grade 5

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	5	Math	0	0	0.0	0	0.0	0	1	53
Spr 2012	5	Math	1	0	0.0	0	0.0	0	1	29
Spr 2012	5	Math	2	0	0.0	0	0.0	0	1	21
Spr 2012	5	Math	3	0	0.0	0	0.0	0	1	17
Spr 2012	5	Math	4	1	0.0	1	0.0	1	1	15
Spr 2012	5	Math	5	1	0.0	2	0.0	1	2	14
Spr 2012	5	Math	6	5	0.0	7	0.0	1	8	13
Spr 2012	5	Math	7	3	0.0	10	0.0	1	14	12
Spr 2012	5	Math	8	9	0.0	19	0.1	1	18	11
Spr 2012	5	Math	9	26	0.1	45	0.2	1	23	11
Spr 2012	5	Math	10	21	0.1	66	0.3	1	26	10
Spr 2012	5	Math	11	49	0.2	115	0.5	1	30	10
Spr 2012	5	Math	12	71	0.3	186	0.9	1	33	10
Spr 2012	5	Math	13	76	0.4	262	1.2	1	37	9
Spr 2012	5	Math	14	117	0.5	379	1.7	1	40	9
Spr 2012	5	Math	15	136	0.6	515	2.4	2	42	9
Spr 2012	5	Math	16	148	0.7	663	3.1	3	45	9
Spr 2012	5	Math	17	152	0.7	815	3.8	3	48	9
Spr 2012	5	Math	18	175	0.8	990	4.6	4	51	9
Spr 2012	5	Math	19	222	1.0	1212	5.6	5	53	9
Spr 2012	5	Math	20	195	0.9	1407	6.5	6	56	8
Spr 2012	5	Math	21	229	1.1	1636	7.5	7	58	8
Spr 2012	5	Math	22	213	1.0	1849	8.5	8	60	8
Spr 2012	5	Math	23	250	1.2	2099	9.7	9	63	8
Spr 2012	5	Math	24	282	1.3	2381	11.0	10	65	8
Spr 2012	5	Math	25	326	1.5	2707	12.5	12	67	8
Spr 2012	5	Math	26	310	1.4	3017	13.9	13	70	8
Spr 2012	5	Math	27	350	1.6	3367	15.5	15	72	8
Spr 2012	5	Math	28	364	1.7	3731	17.2	16	74	8
Spr 2012	5	Math	29	412	1.9	4143	19.1	18	76	8
Spr 2012	5	Math	30	416	1.9	4559	21.0	20	79	8
Spr 2012	5	Math	31	418	1.9	4977	22.9	22	81	8
Spr 2012	5	Math	32	461	2.1	5438	25.1	24	83	8
Spr 2012	5	Math	33	499	2.3	5937	27.4	26	86	8
Spr 2012	5	Math	34	508	2.3	6445	29.7	29	88	8

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	5	Math	35	565	2.6	7010	32.3	31	91	8
Spr 2012	5	Math	36	608	2.8	7618	35.1	34	93	9
Spr 2012	5	Math	37	591	2.7	8209	37.8	36	96	9
Spr 2012	5	Math	38	664	3.1	8873	40.9	39	98	9
Spr 2012	5	Math	39	691	3.2	9564	44.1	43	101	9
Spr 2012	5	Math	40	686	3.2	10250	47.3	46	104	9
Spr 2012	5	Math	41	725	3.3	10975	50.6	49	107	9
Spr 2012	5	Math	42	784	3.6	11759	54.2	52	110	9
Spr 2012	5	Math	43	795	3.7	12554	57.9	56	113	10
Spr 2012	5	Math	44	892	4.1	13446	62.0	60	116	10
Spr 2012	5	Math	45	909	4.2	14355	66.2	64	120	10
Spr 2012	5	Math	46	867	4.0	15222	70.2	68	124	11
Spr 2012	5	Math	47	920	4.2	16142	74.4	72	128	11
Spr 2012	5	Math	48	963	4.4	17105	78.9	77	133	12
Spr 2012	5	Math	49	936	4.3	18041	83.2	81	138	13
Spr 2012	5	Math	50	914	4.2	18955	87.4	85	144	14
Spr 2012	5	Math	51	840	3.9	19795	91.3	89	151	15
Spr 2012	5	Math	52	746	3.4	20541	94.7	93	160	17
Spr 2012	5	Math	53	580	2.7	21121	97.4	96	173	21
Spr 2012	5	Math	54	392	1.8	21513	99.2	98	193	29
Spr 2012	5	Math	55	176	0.8	21689	100.0	99	200	53

Grade 6

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	6	Math	0	0	0.0	0	0.0	0	1	55
Spr 2012	6	Math	1	0	0.0	0	0.0	0	1	31
Spr 2012	6	Math	2	0	0.0	0	0.0	0	1	22
Spr 2012	6	Math	3	0	0.0	0	0.0	0	1	18
Spr 2012	6	Math	4	0	0.0	0	0.0	0	1	16
Spr 2012	6	Math	5	0	0.0	0	0.0	0	1	14
Spr 2012	6	Math	6	1	0.0	1	0.0	1	1	13
Spr 2012	6	Math	7	5	0.0	6	0.0	1	3	12
Spr 2012	6	Math	8	4	0.0	10	0.0	1	7	12
Spr 2012	6	Math	9	16	0.1	26	0.1	1	12	11
Spr 2012	6	Math	10	16	0.1	42	0.2	1	16	11
Spr 2012	6	Math	11	30	0.1	72	0.3	1	20	10
Spr 2012	6	Math	12	40	0.2	112	0.5	1	23	10
Spr 2012	6	Math	13	85	0.4	197	0.9	1	26	10
Spr 2012	6	Math	14	103	0.5	300	1.4	1	30	10
Spr 2012	6	Math	15	117	0.5	417	1.9	2	33	9

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	6	Math	16	159	0.7	576	2.7	2	35	9
Spr 2012	6	Math	17	179	0.8	755	3.5	3	38	9
Spr 2012	6	Math	18	189	0.9	944	4.4	4	41	9
Spr 2012	6	Math	19	221	1.0	1165	5.4	5	44	9
Spr 2012	6	Math	20	196	0.9	1361	6.3	6	46	9
Spr 2012	6	Math	21	240	1.1	1601	7.5	7	49	9
Spr 2012	6	Math	22	261	1.2	1862	8.7	8	51	9
Spr 2012	6	Math	23	261	1.2	2123	9.9	9	53	9
Spr 2012	6	Math	24	262	1.2	2385	11.1	11	56	8
Spr 2012	6	Math	25	286	1.3	2671	12.5	12	58	8
Spr 2012	6	Math	26	309	1.4	2980	13.9	13	61	8
Spr 2012	6	Math	27	300	1.4	3280	15.3	15	63	8
Spr 2012	6	Math	28	336	1.6	3616	16.9	16	65	8
Spr 2012	6	Math	29	390	1.8	4006	18.7	18	68	8
Spr 2012	6	Math	30	350	1.6	4356	20.3	20	70	8
Spr 2012	6	Math	31	376	1.8	4732	22.1	21	72	8
Spr 2012	6	Math	32	400	1.9	5132	23.9	23	75	8
Spr 2012	6	Math	33	436	2.0	5568	26.0	25	77	8
Spr 2012	6	Math	34	435	2.0	6003	28.0	27	79	9
Spr 2012	6	Math	35	458	2.1	6461	30.1	29	82	9
Spr 2012	6	Math	36	473	2.2	6934	32.4	31	84	9
Spr 2012	6	Math	37	458	2.1	7392	34.5	33	87	9
Spr 2012	6	Math	38	510	2.4	7902	36.9	36	89	9
Spr 2012	6	Math	39	560	2.6	8462	39.5	38	92	9
Spr 2012	6	Math	40	561	2.6	9023	42.1	41	94	9
Spr 2012	6	Math	41	534	2.5	9557	44.6	43	97	9
Spr 2012	6	Math	42	623	2.9	10180	47.5	46	100	9
Spr 2012	6	Math	43	635	3.0	10815	50.5	49	103	9
Spr 2012	6	Math	44	612	2.9	11427	53.3	52	106	10
Spr 2012	6	Math	45	659	3.1	12086	56.4	55	109	10
Spr 2012	6	Math	46	702	3.3	12788	59.7	58	112	10
Spr 2012	6	Math	47	755	3.5	13543	63.2	61	116	11
Spr 2012	6	Math	48	740	3.5	14283	66.6	65	120	11
Spr 2012	6	Math	49	772	3.6	15055	70.2	68	124	11
Spr 2012	6	Math	50	730	3.4	15785	73.6	72	128	12
Spr 2012	6	Math	51	780	3.6	16565	77.3	75	133	13
Spr 2012	6	Math	52	801	3.7	17366	81.0	79	139	13
Spr 2012	6	Math	53	806	3.8	18172	84.8	83	145	14
Spr 2012	6	Math	54	831	3.9	19003	88.7	87	153	16
Spr 2012	6	Math	55	787	3.7	19790	92.3	90	162	18
Spr 2012	6	Math	56	748	3.5	20538	95.8	94	175	22

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	6	Math	57	562	2.6	21100	98.4	97	197	31
Spr 2012	6	Math	58	334	1.6	21434	100.0	99	200	56

Grade 7

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	7	Math	0	0	0.0	0	0.0	0	1	54
Spr 2012	7	Math	1	0	0.0	0	0.0	0	1	30
Spr 2012	7	Math	2	0	0.0	0	0.0	0	1	21
Spr 2012	7	Math	3	0	0.0	0	0.0	0	1	18
Spr 2012	7	Math	4	0	0.0	0	0.0	0	1	16
Spr 2012	7	Math	5	0	0.0	0	0.0	0	1	14
Spr 2012	7	Math	6	8	0.0	8	0.0	1	4	13
Spr 2012	7	Math	7	8	0.0	16	0.1	1	9	12
Spr 2012	7	Math	8	13	0.1	29	0.1	1	14	12
Spr 2012	7	Math	9	21	0.1	50	0.2	1	19	11
Spr 2012	7	Math	10	49	0.2	99	0.5	1	23	11
Spr 2012	7	Math	11	67	0.3	166	0.8	1	26	10
Spr 2012	7	Math	12	106	0.5	272	1.3	1	30	10
Spr 2012	7	Math	13	117	0.6	389	1.9	2	33	10
Spr 2012	7	Math	14	144	0.7	533	2.5	2	36	9
Spr 2012	7	Math	15	200	1.0	733	3.5	3	39	9
Spr 2012	7	Math	16	206	1.0	939	4.5	4	42	9
Spr 2012	7	Math	17	237	1.1	1176	5.6	5	45	9
Spr 2012	7	Math	18	252	1.2	1428	6.8	6	47	9
Spr 2012	7	Math	19	269	1.3	1697	8.1	7	50	9
Spr 2012	7	Math	20	260	1.2	1957	9.3	9	52	9
Spr 2012	7	Math	21	312	1.5	2269	10.8	10	55	8
Spr 2012	7	Math	22	270	1.3	2539	12.1	11	57	8
Spr 2012	7	Math	23	304	1.4	2843	13.5	13	60	8
Spr 2012	7	Math	24	359	1.7	3202	15.3	14	62	8
Spr 2012	7	Math	25	336	1.6	3538	16.9	16	64	8
Spr 2012	7	Math	26	397	1.9	3935	18.7	18	66	8
Spr 2012	7	Math	27	363	1.7	4298	20.5	20	69	8
Spr 2012	7	Math	28	371	1.8	4669	22.2	21	71	8
Spr 2012	7	Math	29	378	1.8	5047	24.0	23	73	8
Spr 2012	7	Math	30	400	1.9	5447	25.9	25	76	8
Spr 2012	7	Math	31	410	2.0	5857	27.9	27	78	8
Spr 2012	7	Math	32	451	2.1	6308	30.0	29	80	8
Spr 2012	7	Math	33	475	2.3	6783	32.3	31	82	8

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	7	Math	34	467	2.2	7250	34.5	33	85	8
Spr 2012	7	Math	35	509	2.4	7759	37.0	36	87	8
Spr 2012	7	Math	36	465	2.2	8224	39.2	38	89	8
Spr 2012	7	Math	37	481	2.3	8705	41.5	40	92	8
Spr 2012	7	Math	38	550	2.6	9255	44.1	43	94	9
Spr 2012	7	Math	39	512	2.4	9767	46.5	45	97	9
Spr 2012	7	Math	40	536	2.6	10303	49.1	48	99	9
Spr 2012	7	Math	41	538	2.6	10841	51.6	50	102	9
Spr 2012	7	Math	42	579	2.8	11420	54.4	53	105	9
Spr 2012	7	Math	43	620	3.0	12040	57.3	56	107	9
Spr 2012	7	Math	44	620	3.0	12660	60.3	59	110	9
Spr 2012	7	Math	45	582	2.8	13242	63.1	62	113	10
Spr 2012	7	Math	46	639	3.0	13881	66.1	65	117	10
Spr 2012	7	Math	47	636	3.0	14517	69.1	68	120	10
Spr 2012	7	Math	48	636	3.0	15153	72.2	71	124	11
Spr 2012	7	Math	49	626	3.0	15779	75.2	74	128	11
Spr 2012	7	Math	50	657	3.1	16436	78.3	77	132	12
Spr 2012	7	Math	51	692	3.3	17128	81.6	80	137	12
Spr 2012	7	Math	52	727	3.5	17855	85.0	83	142	13
Spr 2012	7	Math	53	686	3.3	18541	88.3	87	148	14
Spr 2012	7	Math	54	640	3.0	19181	91.4	90	156	15
Spr 2012	7	Math	55	598	2.8	19779	94.2	93	165	18
Spr 2012	7	Math	56	558	2.7	20337	96.9	96	178	21
Spr 2012	7	Math	57	412	2.0	20749	98.8	98	199	30
Spr 2012	7	Math	58	246	1.2	20995	100.0	99	200	54

Grade 8

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	8	Math	0	0	0.0	0	0.0	0	1	54
Spr 2012	8	Math	1	2	0.0	2	0.0	1	1	30
Spr 2012	8	Math	2	1	0.0	3	0.0	1	1	21
Spr 2012	8	Math	3	1	0.0	4	0.0	1	1	18
Spr 2012	8	Math	4	0	0.0	4	0.0	1	1	15
Spr 2012	8	Math	5	1	0.0	5	0.0	1	1	14
Spr 2012	8	Math	6	1	0.0	6	0.0	1	4	13
Spr 2012	8	Math	7	4	0.0	10	0.0	1	9	12
Spr 2012	8	Math	8	11	0.1	21	0.1	1	14	11
Spr 2012	8	Math	9	21	0.1	42	0.2	1	18	11
Spr 2012	8	Math	10	38	0.2	80	0.4	1	22	11

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	8	Math	11	53	0.3	133	0.6	1	25	10
Spr 2012	8	Math	12	92	0.4	225	1.1	1	29	10
Spr 2012	8	Math	13	112	0.5	337	1.6	1	32	10
Spr 2012	8	Math	14	143	0.7	480	2.3	2	35	9
Spr 2012	8	Math	15	214	1.0	694	3.3	3	38	9
Spr 2012	8	Math	16	239	1.1	933	4.5	4	41	9
Spr 2012	8	Math	17	233	1.1	1166	5.6	5	43	9
Spr 2012	8	Math	18	271	1.3	1437	6.9	6	46	9
Spr 2012	8	Math	19	307	1.5	1744	8.4	8	48	9
Spr 2012	8	Math	20	310	1.5	2054	9.9	9	51	8
Spr 2012	8	Math	21	341	1.6	2395	11.5	11	53	8
Spr 2012	8	Math	22	325	1.6	2720	13.1	12	56	8
Spr 2012	8	Math	23	328	1.6	3048	14.7	14	58	8
Spr 2012	8	Math	24	372	1.8	3420	16.4	16	60	8
Spr 2012	8	Math	25	344	1.7	3764	18.1	17	62	8
Spr 2012	8	Math	26	389	1.9	4153	20.0	19	65	8
Spr 2012	8	Math	27	398	1.9	4551	21.9	21	67	8
Spr 2012	8	Math	28	365	1.8	4916	23.6	23	69	8
Spr 2012	8	Math	29	396	1.9	5312	25.5	25	71	8
Spr 2012	8	Math	30	402	1.9	5714	27.5	27	73	8
Spr 2012	8	Math	31	411	2.0	6125	29.4	28	75	8
Spr 2012	8	Math	32	448	2.2	6573	31.6	31	77	8
Spr 2012	8	Math	33	452	2.2	7025	33.8	33	80	8
Spr 2012	8	Math	34	455	2.2	7480	36.0	35	82	8
Spr 2012	8	Math	35	478	2.3	7958	38.3	37	84	8
Spr 2012	8	Math	36	479	2.3	8437	40.6	39	86	8
Spr 2012	8	Math	37	471	2.3	8908	42.8	42	88	8
Spr 2012	8	Math	38	495	2.4	9403	45.2	44	91	8
Spr 2012	8	Math	39	455	2.2	9858	47.4	46	93	8
Spr 2012	8	Math	40	520	2.5	10378	49.9	49	95	8
Spr 2012	8	Math	41	519	2.5	10897	52.4	51	98	8
Spr 2012	8	Math	42	540	2.6	11437	55.0	54	100	9
Spr 2012	8	Math	43	540	2.6	11977	57.6	56	103	9
Spr 2012	8	Math	44	541	2.6	12518	60.2	59	105	9
Spr 2012	8	Math	45	545	2.6	13063	62.8	61	108	9
Spr 2012	8	Math	46	546	2.6	13609	65.4	64	111	9
Spr 2012	8	Math	47	574	2.8	14183	68.2	67	114	10
Spr 2012	8	Math	48	572	2.8	14755	70.9	70	117	10
Spr 2012	8	Math	49	568	2.7	15323	73.7	72	121	10
Spr 2012	8	Math	50	624	3.0	15947	76.7	75	124	10
Spr 2012	8	Math	51	558	2.7	16505	79.4	78	128	11

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	8	Math	52	652	3.1	17157	82.5	81	132	11
Spr 2012	8	Math	53	626	3.0	17783	85.5	84	137	12
Spr 2012	8	Math	54	554	2.7	18337	88.2	87	142	13
Spr 2012	8	Math	55	571	2.7	18908	90.9	90	148	14
Spr 2012	8	Math	56	531	2.6	19439	93.5	92	156	15
Spr 2012	8	Math	57	484	2.3	19923	95.8	95	165	18
Spr 2012	8	Math	58	406	2.0	20329	97.7	97	177	21
Spr 2012	8	Math	59	298	1.4	20627	99.2	98	198	30
Spr 2012	8	Math	60	173	0.8	20800	100.0	99	200	54

Grade 11

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	11	Math	0	0	0.0	0	0.0	0	1	66
Spr 2012	11	Math	1	1	0.0	1	0.0	1	1	36
Spr 2012	11	Math	2	2	0.0	3	0.0	1	1	26
Spr 2012	11	Math	3	0	0.0	3	0.0	1	1	22
Spr 2012	11	Math	4	1	0.0	4	0.0	1	1	19
Spr 2012	11	Math	5	0	0.0	4	0.0	1	1	17
Spr 2012	11	Math	6	2	0.0	6	0.0	1	1	16
Spr 2012	11	Math	7	5	0.0	11	0.1	1	1	15
Spr 2012	11	Math	8	9	0.0	20	0.1	1	1	14
Spr 2012	11	Math	9	13	0.1	33	0.2	1	3	13
Spr 2012	11	Math	10	40	0.2	73	0.4	1	8	13
Spr 2012	11	Math	11	64	0.3	137	0.7	1	12	12
Spr 2012	11	Math	12	82	0.4	219	1.1	1	16	12
Spr 2012	11	Math	13	151	0.7	370	1.8	1	20	12
Spr 2012	11	Math	14	212	1.0	582	2.8	2	24	11
Spr 2012	11	Math	15	238	1.1	820	3.9	3	27	11
Spr 2012	11	Math	16	324	1.6	1144	5.5	5	31	11
Spr 2012	11	Math	17	352	1.7	1496	7.2	6	34	11
Spr 2012	11	Math	18	382	1.8	1878	9.0	8	37	11
Spr 2012	11	Math	19	396	1.9	2274	10.9	10	40	10
Spr 2012	11	Math	20	406	1.9	2680	12.9	12	43	10
Spr 2012	11	Math	21	421	2.0	3101	14.9	14	46	10
Spr 2012	11	Math	22	433	2.1	3534	17.0	16	49	10
Spr 2012	11	Math	23	464	2.2	3998	19.2	18	52	10
Spr 2012	11	Math	24	424	2.0	4422	21.2	20	54	10
Spr 2012	11	Math	25	413	2.0	4835	23.2	22	57	10
Spr 2012	11	Math	26	430	2.1	5265	25.3	24	60	10

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	11	Math	27	448	2.1	5713	27.4	26	62	10
Spr 2012	11	Math	28	426	2.0	6139	29.5	28	65	10
Spr 2012	11	Math	29	435	2.1	6574	31.5	31	67	10
Spr 2012	11	Math	30	424	2.0	6998	33.6	33	70	10
Spr 2012	11	Math	31	428	2.1	7426	35.6	35	73	10
Spr 2012	11	Math	32	454	2.2	7880	37.8	37	75	10
Spr 2012	11	Math	33	453	2.2	8333	40.0	39	78	10
Spr 2012	11	Math	34	439	2.1	8772	42.1	41	80	10
Spr 2012	11	Math	35	451	2.2	9223	44.3	43	83	10
Spr 2012	11	Math	36	463	2.2	9686	46.5	45	86	10
Spr 2012	11	Math	37	447	2.1	10133	48.6	48	89	10
Spr 2012	11	Math	38	477	2.3	10610	50.9	50	91	10
Spr 2012	11	Math	39	445	2.1	11055	53.1	52	94	10
Spr 2012	11	Math	40	441	2.1	11496	55.2	54	97	10
Spr 2012	11	Math	41	423	2.0	11919	57.2	56	100	10
Spr 2012	11	Math	42	480	2.3	12399	59.5	58	103	10
Spr 2012	11	Math	43	516	2.5	12915	62.0	61	106	11
Spr 2012	11	Math	44	511	2.5	13426	64.4	63	109	11
Spr 2012	11	Math	45	547	2.6	13973	67.1	66	112	11
Spr 2012	11	Math	46	479	2.3	14452	69.4	68	116	11
Spr 2012	11	Math	47	451	2.2	14903	71.5	70	120	12
Spr 2012	11	Math	48	508	2.4	15411	74.0	73	123	12
Spr 2012	11	Math	49	524	2.5	15935	76.5	75	127	12
Spr 2012	11	Math	50	519	2.5	16454	79.0	78	132	13
Spr 2012	11	Math	51	549	2.6	17003	81.6	80	137	13
Spr 2012	11	Math	52	562	2.7	17565	84.3	83	142	14
Spr 2012	11	Math	53	545	2.6	18110	86.9	86	147	15
Spr 2012	11	Math	54	558	2.7	18668	89.6	88	154	16
Spr 2012	11	Math	55	505	2.4	19173	92.0	91	161	17
Spr 2012	11	Math	56	515	2.5	19688	94.5	93	170	19
Spr 2012	11	Math	57	442	2.1	20130	96.6	96	181	22
Spr 2012	11	Math	58	352	1.7	20482	98.3	97	197	26
Spr 2012	11	Math	59	264	1.3	20746	99.6	99	200	36
Spr 2012	11	Math	60	92	0.4	20838	100.0	99	200	66

Appendix R: Science Raw-to-Scale Conversion Tables and Distributions of Ability

The charts are simple displays of Scale Score, Raw Score, and percentile rank. The raw score and percentile rank for any Scale Score can be read directly from chart.

The proformance levels *Meets Standards* begins at a Scale Score of 85 and *Exceeds Standards* begins at 135. *Below Standards* is a Scale Score of 84 and below.

The table is a traditional table that was used to create the chart. This table would be used to retrieve the Scale Score or percentile rank for a given raw score. It also includes counts and percentages at each score.

Grade 5

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	5	Science	0	0	0.0	0	0.0	0	1	68
Spr 2012	5	Science	1	1	0.0	1	0.0	1	1	50
Spr 2012	5	Science	2	0	0.0	1	0.0	1	1	31
Spr 2012	5	Science	3	1	0.0	2	0.0	1	1	23
Spr 2012	5	Science	4	1	0.0	3	0.0	1	1	20
Spr 2012	5	Science	5	0	0.0	3	0.0	1	1	17
Spr 2012	5	Science	6	0	0.0	3	0.0	1	1	16
Spr 2012	5	Science	7	4	0.0	7	0.0	1	1	15
Spr 2012	5	Science	8	9	0.0	16	0.1	1	5	14
Spr 2012	5	Science	9	14	0.1	30	0.1	1	11	13
Spr 2012	5	Science	10	22	0.1	52	0.2	1	16	13
Spr 2012	5	Science	11	40	0.2	92	0.4	1	20	12
Spr 2012	5	Science	12	64	0.3	156	0.7	1	25	12
Spr 2012	5	Science	13	67	0.3	223	1.0	1	29	11
Spr 2012	5	Science	14	101	0.5	324	1.5	1	33	11
Spr 2012	5	Science	15	136	0.6	460	2.1	2	36	11
Spr 2012	5	Science	16	192	0.9	652	3.0	3	40	11
Spr 2012	5	Science	17	205	0.9	857	4.0	3	44	10
Spr 2012	5	Science	18	236	1.1	1093	5.0	4	47	10
Spr 2012	5	Science	19	316	1.5	1409	6.5	6	50	10
Spr 2012	5	Science	20	318	1.5	1727	8.0	7	53	10
Spr 2012	5	Science	21	359	1.7	2086	9.6	9	56	10
Spr 2012	5	Science	22	427	2.0	2513	11.6	11	60	10
Spr 2012	5	Science	23	467	2.2	2980	13.7	13	63	10
Spr 2012	5	Science	24	503	2.3	3483	16.1	15	66	10

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	5	Science	25	533	2.5	4016	18.5	17	69	10
Spr 2012	5	Science	26	566	2.6	4582	21.1	20	72	10
Spr 2012	5	Science	27	628	2.9	5210	24.0	23	75	10
Spr 2012	5	Science	28	673	3.1	5883	27.1	26	78	10
Spr 2012	5	Science	29	691	3.2	6574	30.3	29	81	10
Spr 2012	5	Science	30	716	3.3	7290	33.6	32	84	10
Spr 2012	5	Science	31	745	3.4	8035	37.0	35	87	10
Spr 2012	5	Science	32	812	3.7	8847	40.8	39	90	10
Spr 2012	5	Science	33	820	3.8	9667	44.6	43	93	10
Spr 2012	5	Science	34	822	3.8	10489	48.4	46	96	10
Spr 2012	5	Science	35	861	4.0	11350	52.3	50	100	10
Spr 2012	5	Science	36	907	4.2	12257	56.5	54	103	11
Spr 2012	5	Science	37	922	4.3	13179	60.8	59	107	11
Spr 2012	5	Science	38	948	4.4	14127	65.1	63	110	11
Spr 2012	5	Science	39	880	4.1	15007	69.2	67	114	11
Spr 2012	5	Science	40	957	4.4	15964	73.6	71	119	12
Spr 2012	5	Science	41	844	3.9	16808	77.5	76	123	12
Spr 2012	5	Science	42	878	4.0	17686	81.5	80	128	13
Spr 2012	5	Science	43	875	4.0	18561	85.6	84	133	14
Spr 2012	5	Science	44	782	3.6	19343	89.2	87	140	14
Spr 2012	5	Science	45	676	3.1	20019	92.3	91	146	16
Spr 2012	5	Science	46	598	2.8	20617	95.0	94	155	17
Spr 2012	5	Science	47	493	2.3	21110	97.3	96	165	19
Spr 2012	5	Science	48	320	1.5	21430	98.8	98	179	23
Spr 2012	5	Science	49	188	0.9	21618	99.7	99	200	33
Spr 2012	5	Science	50	75	0.3	21693	100.0	99	200	59

Grade 8

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	8	Science	0	1	0.0	1	0.0	1	1	61
Spr 2012	8	Science	1	0	0.0	1	0.0	1	1	34
Spr 2012	8	Science	2	2	0.0	3	0.0	1	1	24
Spr 2012	8	Science	3	1	0.0	4	0.0	1	1	20
Spr 2012	8	Science	4	0	0.0	4	0.0	1	1	18
Spr 2012	8	Science	5	1	0.0	5	0.0	1	1	16
Spr 2012	8	Science	6	2	0.0	7	0.0	1	1	15
Spr 2012	8	Science	7	0	0.0	7	0.0	1	1	14
Spr 2012	8	Science	8	3	0.0	10	0.0	1	1	13
Spr 2012	8	Science	9	1	0.0	11	0.1	1	4	13
Spr 2012	8	Science	10	11	0.1	22	0.1	1	9	12

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	8	Science	11	14	0.1	36	0.2	1	13	12
Spr 2012	8	Science	12	28	0.1	64	0.3	1	17	11
Spr 2012	8	Science	13	47	0.2	111	0.5	1	21	11
Spr 2012	8	Science	14	55	0.3	166	0.8	1	25	11
Spr 2012	8	Science	15	91	0.4	257	1.2	1	28	11
Spr 2012	8	Science	16	99	0.5	356	1.7	1	31	10
Spr 2012	8	Science	17	116	0.6	472	2.3	2	34	10
Spr 2012	8	Science	18	155	0.7	627	3.0	3	37	10
Spr 2012	8	Science	19	186	0.9	813	3.9	3	40	10
Spr 2012	8	Science	20	183	0.9	996	4.8	4	43	10
Spr 2012	8	Science	21	228	1.1	1224	5.9	5	46	10
Spr 2012	8	Science	22	266	1.3	1490	7.2	7	49	10
Spr 2012	8	Science	23	277	1.3	1767	8.5	8	52	10
Spr 2012	8	Science	24	277	1.3	2044	9.8	9	54	9
Spr 2012	8	Science	25	307	1.5	2351	11.3	11	57	9
Spr 2012	8	Science	26	291	1.4	2642	12.7	12	60	9
Spr 2012	8	Science	27	348	1.7	2990	14.4	14	62	9
Spr 2012	8	Science	28	354	1.7	3344	16.1	15	65	9
Spr 2012	8	Science	29	403	1.9	3747	18.0	17	67	9
Spr 2012	8	Science	30	426	2.0	4173	20.0	19	70	9
Spr 2012	8	Science	31	461	2.2	4634	22.3	21	73	9
Spr 2012	8	Science	32	479	2.3	5113	24.6	23	75	9
Spr 2012	8	Science	33	549	2.6	5662	27.2	26	78	9
Spr 2012	8	Science	34	554	2.7	6216	29.9	29	80	9
Spr 2012	8	Science	35	536	2.6	6752	32.4	31	83	9
Spr 2012	8	Science	36	612	2.9	7364	35.4	34	86	9
Spr 2012	8	Science	37	612	2.9	7976	38.3	37	88	10
Spr 2012	8	Science	38	643	3.1	8619	41.4	40	91	10
Spr 2012	8	Science	39	678	3.3	9297	44.7	43	94	10
Spr 2012	8	Science	40	698	3.4	9995	48.0	46	97	10
Spr 2012	8	Science	41	755	3.6	10750	51.6	50	99	10
Spr 2012	8	Science	42	763	3.7	11513	55.3	53	102	10
Spr 2012	8	Science	43	805	3.9	12318	59.2	57	105	10
Spr 2012	8	Science	44	787	3.8	13105	63.0	61	109	10
Spr 2012	8	Science	45	796	3.8	13901	66.8	65	112	11
Spr 2012	8	Science	46	787	3.8	14688	70.6	69	115	11
Spr 2012	8	Science	47	724	3.5	15412	74.0	72	119	11
Spr 2012	8	Science	48	761	3.7	16173	77.7	76	123	11
Spr 2012	8	Science	49	721	3.5	16894	81.2	79	127	12
Spr 2012	8	Science	50	711	3.4	17605	84.6	83	131	12
Spr 2012	8	Science	51	609	2.9	18214	87.5	86	135	13

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	8	Science	52	543	2.6	18757	90.1	89	140	13
Spr 2012	8	Science	53	529	2.5	19286	92.6	91	146	14
Spr 2012	8	Science	54	423	2.0	19709	94.7	94	152	15
Spr 2012	8	Science	55	376	1.8	20085	96.5	96	159	16
Spr 2012	8	Science	56	290	1.4	20375	97.9	97	167	18
Spr 2012	8	Science	57	223	1.1	20598	99.0	98	178	20
Spr 2012	8	Science	58	124	0.6	20722	99.5	99	192	24
Spr 2012	8	Science	59	68	0.3	20790	99.9	99	200	34
Spr 2012	8	Science	60	26	0.1	20816	100.0	99	200	61

Grade 11

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	11	Science	0	0	0	0	0	0	1	49
Spr 2012	11	Science	1	0	0	0	0	0	1	27
Spr 2012	11	Science	2	2	0	2	0	1	1	20
Spr 2012	11	Science	3	1	0	3	0	1	1	16
Spr 2012	11	Science	4	2	0	5	0	1	4	14
Spr 2012	11	Science	5	1	0	6	0	1	11	13
Spr 2012	11	Science	6	5	0	11	0.1	1	17	12
Spr 2012	11	Science	7	8	0	19	0.1	1	22	11
Spr 2012	11	Science	8	8	0	27	0.1	1	26	10
Spr 2012	11	Science	9	8	0	35	0.2	1	30	10
Spr 2012	11	Science	10	34	0.2	69	0.3	1	33	10
Spr 2012	11	Science	11	50	0.2	119	0.6	1	37	9
Spr 2012	11	Science	12	91	0.4	210	1	1	40	9
Spr 2012	11	Science	13	98	0.5	308	1.5	1	43	9
Spr 2012	11	Science	14	152	0.7	460	2.2	2	45	9
Spr 2012	11	Science	15	190	0.9	650	3.1	3	48	8
Spr 2012	11	Science	16	220	1.1	870	4.2	4	50	8
Spr 2012	11	Science	17	238	1.1	1108	5.3	5	53	8
Spr 2012	11	Science	18	272	1.3	1380	6.6	6	55	8
Spr 2012	11	Science	19	278	1.3	1658	8	7	58	8
Spr 2012	11	Science	20	321	1.5	1979	9.5	9	60	8
Spr 2012	11	Science	21	348	1.7	2327	11.2	10	62	8
Spr 2012	11	Science	22	338	1.6	2665	12.8	12	64	8
Spr 2012	11	Science	23	344	1.7	3009	14.4	14	66	7
Spr 2012	11	Science	24	398	1.9	3407	16.4	15	68	7
Spr 2012	11	Science	25	416	2	3823	18.3	17	70	7
Spr 2012	11	Science	26	399	1.9	4222	20.3	19	72	7
Spr 2012	11	Science	27	404	1.9	4626	22.2	21	74	7

Admin	Grade	Content Area	Raw Score	Count	Percent	Cum Count	Cum Percent	Percentile	Scale Score	S.E.
Spr 2012	11	Science	28	451	2.2	5077	24.4	23	76	7
Spr 2012	11	Science	29	413	2	5490	26.3	25	78	7
Spr 2012	11	Science	30	407	2	5897	28.3	27	80	7
Spr 2012	11	Science	31	480	2.3	6377	30.6	29	82	7
Spr 2012	11	Science	32	489	2.3	6866	33	32	84	7
Spr 2012	11	Science	33	489	2.3	7355	35.3	34	86	7
Spr 2012	11	Science	34	525	2.5	7880	37.8	37	88	7
Spr 2012	11	Science	35	555	2.7	8435	40.5	39	90	7
Spr 2012	11	Science	36	540	2.6	8975	43.1	42	92	7
Spr 2012	11	Science	37	548	2.6	9523	45.7	44	94	7
Spr 2012	11	Science	38	563	2.7	10086	48.4	47	96	8
Spr 2012	11	Science	39	631	3	10717	51.4	50	98	8
Spr 2012	11	Science	40	591	2.8	11308	54.3	53	101	8
Spr 2012	11	Science	41	669	3.2	11977	57.5	56	103	8
Spr 2012	11	Science	42	593	2.8	12570	60.3	59	105	8
Spr 2012	11	Science	43	626	3	13196	63.3	62	107	8
Spr 2012	11	Science	44	621	3	13817	66.3	65	110	8
Spr 2012	11	Science	45	617	3	14434	69.3	68	112	8
Spr 2012	11	Science	46	641	3.1	15075	72.4	71	115	9
Spr 2012	11	Science	47	634	3	15709	75.4	74	118	9
Spr 2012	11	Science	48	593	2.8	16302	78.2	77	121	9
Spr 2012	11	Science	49	604	2.9	16906	81.1	80	124	9
Spr 2012	11	Science	50	628	3	17534	84.2	83	127	10
Spr 2012	11	Science	51	575	2.8	18109	86.9	86	131	10
Spr 2012	11	Science	52	547	2.6	18656	89.5	88	135	10
Spr 2012	11	Science	53	567	2.7	19223	92.3	91	139	11
Spr 2012	11	Science	54	437	2.1	19660	94.4	93	144	12
Spr 2012	11	Science	55	414	2	20074	96.3	95	149	13
Spr 2012	11	Science	56	294	1.4	20368	97.8	97	156	14
Spr 2012	11	Science	57	232	1.1	20600	98.9	98	164	16
Spr 2012	11	Science	58	140	0.7	20740	99.5	99	176	20
Spr 2012	11	Science	59	73	0.4	20813	99.9	99	195	27
Spr 2012	11	Science	60	22	0.1	20835	100	99	200	49

Appendix S: Reading Item Bank Difficulties

Grade 3 Reading

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
1	19824	22154	-1.7502A	.0200	.68	-9.9	.50	-9.9	.39	.32	90.2	85.1	-.4807	562968
2	18643	22154	-1.8913A	.0208	1.07	5.3	.98	-.7	.38	.30	84.5	86.6	.2143	562972
3	18669	22154	-1.9672A	.0213	1.07	5.1	.86	-5.4	.43	.30	84.6	87.3	.2813	562976
4	16052	22154	-.5429A	.0157	.82	-9.9	.74	-9.9	.49	.40	78.8	72.4	-.3252	562987
5	13593	22154	-.3321A	.0154	1.02	3.0	1.03	2.5	.41	.41	70.1	70.7	.0810	562989
6	18547	22154	-1.2809A	.0178	.82	-9.9	.76	-9.9	.36	.36	84.6	80.0	-.3773	562990
7	19609	22154	-1.7948A	.0203	.81	-9.9	.83	-7.7	.31	.31	88.9	85.6	-.3180	562991
8	13129	22154	-.3652A	.0154	1.07	9.9	1.12	9.9	.40	.41	68.9	70.9	.2219	562992
9	12601	22156	-.0902A	.0151	1.06	9.9	1.05	5.8	.38	.42	65.8	69.3	.0662	562995
10	13904	22156	-.2165A	.0152	.87	-9.9	.81	-9.9	.52	.42	75.1	70.0	-.1083	563004
11	18450	22156	-1.6601A	.0195	.92	-6.8	.76	-9.9	.43	.32	84.4	84.2	.0534	563018
12	15259	22156	-.7725A	.0162	1.08	9.9	1.10	7.5	.36	.39	72.2	74.5	.1199	563021
13	13222	22156	.1583A	.0149	1.03	4.9	1.04	4.4	.39	.43	67.4	68.5	-.3237	563022
14	14768	22156	-.3508A	.0154	.91	-9.9	.87	-9.9	.46	.41	73.8	70.8	-.1831	565104
15	17896	22156	-1.3583A	.0181	.91	-9.7	.78	-9.9	.42	.35	82.2	80.9	-.0557	565114
16	13060	22154	-.2251A	.0152	1.10	9.9	1.17	9.9	.34	.42	66.9	70.0	.0968	602276
17	16515	22154	-1.0894A	.0171	.93	-8.2	.84	-9.9	.48	.37	78.9	77.9	.1016	602277
18	10855	22154	.1317A	.0149	1.13	9.9	1.20	9.9	.32	.43	63.6	68.5	.2335	602278
19	14848	22154	-.6025A	.0158	1.00	-.2	.95	-4.3	.42	.40	71.8	72.9	.0513	602279
20	16602	22154	-1.0056A	.0168	.87	-9.9	.79	-9.9	.49	.38	80.1	77.0	-.0090	602281
21	15637	22154	-.7417A	.0161	1.03	4.1	1.06	4.4	.36	.39	73.5	74.2	-.0104	602289
22	19133	22156	-1.8633A	.0207	.97	-2.5	.92	-3.3	.33	.31	86.6	86.3	-.0181	602325
23	16204	22156	-1.0430A	.0170	1.08	9.1	1.08	5.1	.37	.37	75.1	77.4	.1426	602326
24	16607	22156	-.7979A	.0163	.88	-9.9	.82	-9.9	.43	.39	77.8	74.8	-.2225	602332
25	12743	22156	.3751A	.0149	1.11	9.9	1.15	9.9	.34	.43	63.5	68.4	-.4289	602333
26	17094	22156	-.7806A	.0162	.83	-9.9	.74	-9.9	.44	.39	79.7	74.6	-.3872	602337
27	16285	22154	-.9998A	.0168	1.13	9.9	1.20	9.9	.29	.38	73.5	76.9	.0757	602341
28	15460	22154	-1.0165A	.0169	1.13	9.9	1.14	9.1	.40	.38	73.3	77.1	.3145	602343
29	12592	22154	-.3910A	.0154	1.05	7.4	1.02	2.1	.46	.41	68.0	71.1	.3701	602348
30	17441	22154	-1.4552A	.0185	.99	-.8	.86	-7.6	.46	.34	80.7	82.0	.1942	602354
31	10739	22154	.3781A	.0149	1.29	9.9	1.40	9.9	.17	.43	56.0	68.4	.0135	602356
32	16399	22156	-.7326A	.0161	1.05	7.0	1.10	7.5	.27	.39	72.6	74.1	-.2291	632655
33	17251	22156	-1.1150A	.0172	.87	-9.9	.78	-9.9	.45	.37	81.0	78.1	-.0928	632660
34	17757	22156	-1.2063A	.0175	.94	-6.5	.89	-6.5	.35	.36	80.6	79.2	-.1647	632661
35	11304	22156	.0551A	.0150	1.08	9.9	1.11	9.9	.38	.43	65.9	68.7	.2108	632663
36	14620	22156	-.3611A	.0154	1.06	9.8	1.08	7.9	.33	.41	68.3	70.9	-.1357	632665
37	19349	22156	-1.7954A	.0203	.85	-9.9	.86	-6.0	.33	.31	88.0	85.6	-.1875	632669
38	12285	22154	-.2280A	.0152	1.20	9.9	1.28	9.9	.29	.42	62.1	70.0	.2755	632716
39	19054	22154	-1.7261A	.0199	.80	-9.9	.63	-9.9	.44	.32	86.9	84.9	-.1257	632719
40	14395	22154	-.5097A	.0156	.97	-4.6	.98	-1.4	.45	.41	73.6	72.1	.0691	632720
41	15210	22154	-.6799A	.0160	.97	-4.1	.91	-7.4	.44	.40	73.7	73.6	.0381	632721
42	12166	22154	.0036A	.0150	.98	-3.1	.98	-2.4	.45	.43	70.0	68.9	.0699	632722
43	12279	22154	-.0714A	.0151	1.03	5.9	1.03	3.8	.41	.42	67.4	69.2	.1197	632723
44	16200	22154	-1.0765A	.0171	1.18	9.9	1.26	9.9	.29	.37	73.5	77.7	.1774	632724
45	13842	22154	-.3759A	.0154	.95	-7.4	.91	-8.6	.47	.41	72.4	71.0	.0667	632727
46	3003	7202	.5376	.0265	1.06	5.3	1.10	6.4	.37	.42	67.7	69.4	-.0003	645588
47	3378	7202	.2784	.0262	1.11	9.9	1.14	9.6	.33	.43	63.5	68.4	-.0003	645589
48	4572	7202	-.5488	.0269	1.00	.0	.97	-2.0	.41	.41	70.2	70.7	-.0006	645590
49	4369	7202	-.4036	.0266	1.00	-.4	.97	-2.1	.42	.41	69.2	69.7	-.0006	645591
50	3755	7202	.0211	.0261	1.05	4.7	1.06	4.3	.38	.43	66.4	68.3	-.0004	645592
51	1716	7202	1.5393	.0302	1.10	6.1	1.30	9.9	.28	.39	76.9	78.3	-.0001	645593
52	5296	7202	-1.1098	.0290	.92	-5.9	.86	-5.7	.45	.38	77.9	75.8	-.0006	645594
53	1172	7202	2.0981	.0344	1.27	9.9	2.12	9.9	.02	.35	82.7	84.4	.0000	645595
54	5248	7202	-1.0696	.0288	.84	-9.9	.74	-9.9	.53	.38	79.4	75.4	-.0006	645596
55	5524	7202	-1.3089	.0301	.99	-.9	.90	-3.7	.39	.36	77.5	78.0	-.0007	645597
56	2045	3673	.1103	.0365	.98	-1.3	.97	-1.5	.43	.41	69.0	68.1	.0021	645598
57	1531	3673	.7927	.0368	.98	-1.6	1.01	.5	.42	.41	70.3	68.5	.0023	645602

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
58	1228	3673	1.2170	.0382	1.20	9.9	1.38	9.9	.19	.40	65.5	71.7	.0024	645604
59	2212	3673	-.1150	.0370	1.02	1.7	1.02	.8	.38	.40	68.1	69.2	.0021	645605
60	2653	3673	-.7608	.0400	1.07	3.9	1.14	4.2	.30	.38	73.1	75.0	.0020	645606
61	2152	3673	-.0334	.0368	.97	-2.5	.94	-2.8	.44	.41	69.8	68.7	.0021	645608
62	2996	3673	-1.3784	.0455	.88	-4.6	.75	-5.8	.45	.33	83.4	82.1	.0019	645609
63	1470	3673	.8757	.0370	1.17	9.9	1.29	9.9	.24	.41	62.9	69.0	.0023	645610
64	2331	3673	-.2802	.0375	1.09	5.6	1.12	4.9	.32	.40	67.0	70.4	.0021	645611
65	2275	3673	-.2019	.0373	.95	-3.4	.93	-3.2	.45	.40	71.5	69.8	.0021	645613
66	3464	3839	-2.2189	.0572	.89	-2.7	.71	-4.3	.38	.27	90.2	90.3	.0017	645614
67	2363	3839	-.1696	.0367	.93	-4.8	.89	-5.1	.48	.42	72.8	70.4	.0019	645615
68	1253	3839	1.2981	.0379	1.07	4.2	1.20	6.9	.33	.41	70.9	72.6	.0023	645616
69	1718	3839	.6691	.0360	1.05	3.4	1.08	3.9	.38	.43	67.7	68.6	.0022	645617
70	1376	3839	1.1247	.0372	1.11	7.0	1.22	8.5	.31	.42	68.0	71.1	.0023	645618
71	2462	3839	-.3046	.0372	.88	-7.7	.83	-7.2	.52	.41	74.9	71.4	.0019	645619
72	3104	3839	-1.3316	.0443	.93	-2.9	.89	-2.5	.41	.35	82.7	81.7	.0017	645621
73	2540	3839	-.4137	.0376	1.09	5.2	1.15	5.4	.33	.41	69.5	72.3	.0019	645622
74	1651	3839	.7563	.0362	.97	-2.1	1.01	.3	.45	.43	71.2	68.9	.0022	645623
75	2548	3839	-.4250	.0377	.93	-4.4	.93	-2.7	.47	.41	75.7	72.4	.0018	645624
76	2434	3719	-.3956	.0381	.95	-3.2	.90	-3.9	.46	.41	72.8	71.9	-.0010	645625
77	3370	3719	-2.2918	.0590	.90	-2.6	.68	-4.5	.37	.27	90.7	90.6	-.0011	645627
78	2989	3719	-1.3181	.0446	.89	-4.5	.78	-5.1	.45	.35	82.5	81.3	-.0012	645629
79	3300	3719	-2.0656	.0548	.91	-2.5	.75	-3.9	.37	.29	89.1	88.7	-.0011	645632
80	3309	3719	-2.0930	.0553	.85	-4.3	.58	-6.8	.43	.29	89.3	89.0	-.0010	645633
81	3213	3719	-1.8233	.0509	.94	-2.0	.84	-2.7	.37	.31	87.0	86.5	-.0010	645634
82	3304	3719	-2.0777	.0550	.94	-1.6	.95	-.7	.33	.29	89.1	88.8	-.0012	645635
83	2388	3719	-.3293	.0378	1.04	2.2	1.03	1.0	.39	.42	69.2	71.3	-.0010	645636
84	2732	3719	-.8547	.0406	1.08	4.0	1.21	5.5	.31	.39	75.0	76.3	-.0011	645637
85	1720	3719	.5784	.0366	.92	-6.1	.92	-4.1	.50	.44	73.0	68.6	-.0010	645638
86	2650	3723	-.6620	.0396	.92	-4.3	.82	-5.8	.47	.39	75.8	74.6	.0000	645640
87	1544	3723	.8669	.0369	.99	-.9	1.01	.5	.43	.43	71.1	69.5	.0001	645641
88	2602	3723	-.5875	.0392	1.07	4.1	1.12	3.7	.33	.40	71.7	73.9	.0000	645642
89	3304	3723	-2.0028	.0546	.90	-2.8	.73	-4.2	.38	.28	88.9	88.8	.0000	645643
90	2725	3723	-.7819	.0404	.90	-5.6	.81	-5.8	.48	.38	77.9	75.9	.0000	645644
91	1893	3723	.4002	.0364	.93	-5.1	.92	-4.0	.49	.43	71.8	68.4	.0000	645645
92	3004	3723	-1.2821	.0447	.93	-3.0	.89	-2.5	.41	.35	83.0	81.5	-.0001	645646
93	2348	3723	-.2156	.0375	1.22	9.9	1.36	9.9	.21	.42	63.3	70.8	.0000	645651
94	3006	3723	-1.2861	.0447	.92	-3.4	.80	-4.6	.43	.35	82.5	81.5	-.0001	645652
95	2228	3723	-.0491	.0370	1.02	1.1	1.01	.5	.41	.42	68.8	69.7	.0000	645655

Grade 4 Reading

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
1	11484	21972	-.2146A	.0150	1.05	8.8	1.05	5.5	.41	.40	65.1	68.2	.3267	563382
2	16635	21972	-1.4485A	.0182	1.06	6.0	.98	-1.2	.46	.32	77.9	81.1	.3304	563383
3	16531	21972	-1.4202A	.0180	1.07	6.9	.95	-2.8	.46	.33	77.4	80.8	.3315	563384
4	11462	21972	-.0324A	.0148	1.05	8.9	1.06	7.0	.37	.40	64.8	67.4	.1489	563385
5	15726	21972	-1.0862A	.0168	1.08	9.8	1.07	4.6	.37	.35	73.6	76.7	.2138	563392
6	12867	21974	.0658A	.0148	1.05	9.0	1.06	7.2	.34	.40	64.7	67.2	-.2595	602395
7	17230	21974	-1.2377A	.0173	1.03	3.3	1.15	9.2	.26	.34	79.1	78.5	-.0625	602396
8	19088	21974	-1.9911A	.0211	.98	-1.2	.93	-2.9	.31	.28	87.0	87.1	.0193	602399
9	14223	21974	.1193A	.0148	.97	-5.9	.95	-6.2	.42	.40	68.6	67.1	-.6256	602400
10	15813	21974	-.7838A	.0159	.93	-9.5	.89	-9.5	.40	.37	75.3	73.2	-.1163	602432
11	14602	21974	-1.0184A	.0166	1.29	9.9	1.46	9.9	.27	.36	68.2	75.9	.4281	602435
12	12918	21974	-.0346A	.0148	.93	-9.9	.92	-9.9	.45	.40	71.4	67.4	-.1707	602436
13	15133	21974	-.1452A	.0149	.97	-5.0	.96	-5.5	.36	.40	69.0	67.9	-.5855	602442
14	16854	21974	-1.5307A	.0185	1.13	9.9	1.09	4.4	.41	.32	78.1	82.1	.3497	602443

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
15	14484	21972	-.7300A	.0158	1.13	9.9	1.23	9.9	.30	.37	69.1	72.6	.1657	602446
16	13273	21972	-.4902A	.0153	.97	-5.0	.93	-6.8	.47	.38	70.7	70.2	.2067	602447
17	13262	21972	-.2215A	.0150	.97	-6.2	.94	-6.9	.42	.40	69.4	68.3	-.0613	602449
18	18151	21972	-1.7799A	.0198	1.00	-.2	.86	-6.9	.43	.30	83.3	84.9	.1802	602452
19	15373	21972	-.8004A	.0160	1.01	1.5	1.01	.5	.36	.37	73.2	73.4	.0160	602455
20	15503	21972	-1.1581A	.0170	1.15	9.9	1.17	9.9	.38	.35	73.0	77.6	.3444	602456
21	13809	21972	-.3741A	.0152	.97	-5.3	.95	-5.1	.41	.39	70.5	69.3	-.0337	633012
22	12875	21972	-.1450A	.0149	1.02	2.7	1.01	1.8	.38	.40	66.7	67.9	-.0505	633013
23	15401	21972	-.8201A	.0160	1.02	2.3	1.05	4.3	.36	.37	73.7	73.6	.0287	633014
24	15758	21972	-.8567A	.0161	.92	-9.9	.91	-7.7	.43	.37	76.8	74.0	-.0276	633017
25	8008	21972	.8231A	.0152	1.07	9.9	1.10	9.9	.32	.40	66.7	69.8	.0629	633021
26	17442	21972	-1.4801A	.0183	1.03	2.4	1.02	1.1	.36	.32	80.6	81.5	.1172	633024
27	12432	21972	.1316A	.0148	1.05	9.4	1.07	8.6	.35	.40	65.0	67.1	-.2283	633025
28	16121	21974	-.8880A	.0162	.87	-9.9	.77	-9.9	.47	.36	77.4	74.4	-.0939	633039
29	17836	21974	-1.1649A	.0170	.84	-9.9	.77	-9.9	.37	.35	82.4	77.6	-.3384	633044
30	14463	21974	-.7240A	.0158	1.15	9.9	1.33	9.9	.27	.37	68.6	72.5	.1647	633046
31	11186	21974	.0592A	.0148	1.05	9.0	1.06	7.1	.36	.40	64.6	67.2	.1175	633048
32	13662	21974	-.3072A	.0151	1.02	3.6	1.00	-.4	.37	.39	67.2	68.8	-.0668	633049
33	16631	21972	-1.2131A	.0172	.98	-2.4	.90	-6.5	.41	.34	77.8	78.2	.0928	633074
34	14376	21972	-.6413A	.0156	1.01	1.4	1.01	.5	.40	.38	71.0	71.7	.1020	633077
35	14075	21972	-.6138A	.0156	1.07	9.9	1.08	7.5	.36	.38	68.1	71.4	.1458	633081
36	16095	21972	-1.0653A	.0167	.96	-5.3	.89	-7.7	.44	.35	76.6	76.4	.0934	633086
37	13425	21972	-.2851A	.0151	1.06	9.8	1.08	9.1	.33	.39	66.1	68.6	-.0345	633087
38	11882	21972	-.2485A	.0150	1.07	9.9	1.08	9.3	.38	.39	65.0	68.4	.2737	633088
39	11626	21972	.0914A	.0148	1.06	9.9	1.08	9.9	.34	.40	64.3	67.1	-.0109	633093
40	17462	21974	-1.6883A	.0193	1.19	9.9	1.17	7.8	.34	.30	79.8	83.9	.3221	633098
41	12324	21974	.0289A	.0148	1.04	8.0	1.06	7.1	.35	.40	65.6	67.3	-.1018	633099
42	15569	21974	-.1342A	.0149	1.02	4.0	1.02	2.5	.30	.40	66.4	67.8	-.7094	633105
43	17877	21974	-1.4811A	.0183	.99	-.9	1.02	1.1	.31	.32	82.2	81.5	-.0271	633107
44	12526	21974	.1432A	.0148	1.00	.5	1.00	-.2	.40	.40	66.9	67.1	-.2605	633111
45	11346	21974	.3415A	.0148	1.06	9.9	1.08	9.9	.36	.40	64.7	67.3	-.1985	633114
46	1980	3621	.0706	.0364	1.04	3.3	1.04	2.3	.36	.40	64.5	67.2	.0019	645682
47	3245	3621	-2.1802	.0568	.90	-2.6	.68	-5.3	.38	.25	89.7	89.7	.0017	645683
48	2066	3621	-.0440	.0366	.92	-5.8	.90	-5.1	.47	.39	71.5	67.6	.0019	645684
49	1716	3621	.4191	.0364	1.14	9.9	1.19	9.9	.25	.40	60.2	67.1	.0020	645685
50	1898	3621	.1791	.0363	.88	-9.8	.86	-8.3	.52	.40	73.9	67.0	.0019	645686
51	2899	3621	-1.3320	.0443	.91	-3.6	.79	-5.3	.42	.32	81.9	80.7	.0017	645688
52	787	3621	1.8067	.0433	1.26	9.9	1.62	9.9	.06	.35	75.7	79.5	.0021	645689
53	2034	3621	-.0013	.0365	.93	-5.7	.89	-5.9	.47	.40	69.9	67.4	.0019	645690
54	3004	3621	-1.5492	.0468	.94	-2.0	.88	-2.5	.37	.31	83.6	83.3	.0017	645692
55	2228	3621	-.2641	.0372	1.21	9.9	1.30	9.9	.18	.39	61.0	68.9	.0019	645694
56	5047	7260	-.9411	.0275	.96	-3.1	.92	-3.9	.41	.37	73.4	72.7	-.0004	645696
57	3869	7260	-.1216	.0257	1.17	9.9	1.23	9.9	.23	.40	59.5	67.1	-.0004	645697
58	6237	7260	-2.0584	.0354	.87	-5.8	.65	-9.9	.43	.28	86.2	86.0	-.0005	645698
59	4571	7260	-.5957	.0264	1.05	4.7	1.06	3.6	.34	.39	67.0	69.4	-.0004	645699
60	2580	7260	.7478	.0268	1.19	9.9	1.30	9.9	.19	.39	64.0	70.6	-.0002	645700
61	3591	7260	.0618	.0257	1.08	8.3	1.10	7.9	.32	.40	63.5	67.1	-.0003	645701
62	4413	7260	-.4865	.0262	.98	-2.0	.96	-2.7	.41	.39	68.9	68.7	-.0004	645703
63	4973	7260	-.8853	.0273	1.18	9.9	1.36	9.9	.17	.37	67.4	72.2	-.0004	645705
64	5906	7260	-1.6851	.0320	.96	-2.3	.90	-3.4	.36	.31	82.2	81.7	-.0006	645706
65	5508	7260	-1.3127	.0294	.92	-5.6	.84	-6.5	.43	.34	78.4	77.1	-.0006	645711
66	2313	3734	-.2473	.0369	1.02	1.4	1.00	.0	.38	.40	68.0	69.4	.0020	645726
67	1734	3734	.5112	.0361	.97	-2.6	.97	-1.5	.44	.41	69.8	67.6	.0021	645729
68	3404	3734	-2.3514	.0600	.94	-1.3	.77	-3.2	.31	.24	91.3	91.2	.0020	645730
69	3389	3734	-2.2985	.0589	.97	-.6	.91	-1.2	.28	.25	90.8	90.8	.0019	645731
70	2427	3734	-.4043	.0374	.97	-1.8	.97	-1.3	.41	.39	72.2	70.6	.0020	645732
71	1770	3734	.4644	.0360	1.08	5.9	1.12	6.4	.33	.41	63.5	67.5	.0021	645734
72	1701	3734	.5542	.0361	.88	-9.0	.86	-7.7	.52	.41	74.3	67.8	.0021	645735
73	2520	3734	-.5365	.0380	.87	-8.6	.79	-8.1	.51	.38	76.5	71.9	.0020	645736
74	2809	3734	-.9824	.0409	.96	-1.8	.91	-2.5	.40	.35	77.5	76.9	.0020	645737

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
75	1809	3734	.4138	.0360	1.06	4.2	1.07	3.7	.36	.41	64.9	67.4	.0021	645738
76	1177	3663	1.2097	.0385	1.06	3.3	1.19	7.0	.31	.39	72.5	72.4	.0012	645792
77	1732	3663	.4465	.0362	1.08	5.9	1.10	5.3	.33	.40	63.9	67.1	.0011	645794
78	2691	3663	-.8894	.0403	.90	-5.1	.80	-6.4	.46	.36	77.4	75.6	.0009	645795
79	2759	3663	-1.0024	.0412	1.04	2.0	1.07	2.0	.31	.35	76.3	77.0	.0009	645796
80	1803	3663	.3535	.0362	1.10	7.7	1.16	8.3	.30	.40	63.0	66.9	.0011	645799
81	2345	3663	-.3707	.0375	.98	-1.0	.99	-.6	.40	.39	70.2	70.0	.0010	645800
82	3157	3663	-1.8126	.0505	.83	-5.5	.59	-8.3	.47	.29	87.2	86.3	.0009	645801
83	2728	3663	-.9502	.0408	.97	-1.6	.90	-2.9	.39	.35	76.7	76.3	.0009	645802
84	2945	3663	-1.3413	.0444	.96	-1.7	.89	-2.6	.37	.33	81.2	81.0	.0009	645805
85	3085	3663	-1.6384	.0480	.87	-4.5	.73	-5.8	.44	.30	85.4	84.5	.0008	645806
86	1499	3696	.7410	.0365	1.14	9.5	1.20	9.7	.25	.39	62.6	68.2	.0024	645808
87	2588	3696	-.7098	.0387	1.04	2.2	1.05	1.8	.32	.36	71.3	73.0	.0021	645809
88	2642	3696	-.7915	.0392	.90	-5.5	.82	-6.3	.46	.35	76.2	73.9	.0021	645810
89	1249	3696	1.0841	.0377	1.27	9.9	1.52	9.9	.08	.38	63.6	71.2	.0024	645812
90	2472	3696	-.5408	.0378	1.02	1.1	1.05	2.0	.34	.37	71.2	71.1	.0021	645813
91	1112	3696	1.2848	.0388	1.05	3.0	1.19	6.5	.30	.38	73.1	73.4	.0025	645816
92	3180	3696	-1.8069	.0498	.92	-2.7	.74	-5.2	.38	.28	86.4	86.1	.0020	645817
93	3028	3696	-1.4657	.0453	1.07	2.6	1.30	6.0	.21	.31	82.4	82.3	.0019	645818
94	1804	3696	.3439	.0358	.99	-.7	1.00	.2	.40	.39	67.7	66.6	.0023	645819
95	2141	3696	-.0911	.0362	.90	-7.6	.88	-6.6	.48	.39	72.4	67.4	.0022	645820

Grade 5 Reading

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
1	11089	21635	.0622A	.0152	1.10	9.9	1.12	9.9	.36	.43	64.2	68.8	.2196	602462
2	12338	21635	.0877A	.0152	1.04	7.5	1.05	6.0	.38	.43	66.6	68.7	-.0919	602465
3	10800	21635	.3858A	.0151	1.12	9.9	1.17	9.9	.32	.43	63.2	68.3	-.0377	602467
4	15094	21635	-.3420A	.0156	.95	-8.7	.91	-8.3	.40	.41	72.9	71.0	-.3404	602468
5	15840	21635	-1.0407A	.0173	1.07	7.6	1.11	6.5	.38	.37	76.3	77.8	.1627	602469
6	14746	21635	-.8232A	.0166	1.13	9.9	1.18	9.9	.37	.39	71.5	75.5	.2390	602470
7	10453	21633	.2508A	.0151	1.04	7.3	1.06	6.9	.40	.43	66.8	68.3	.1753	602484
8	11758	21633	-.0802A	.0153	1.12	9.9	1.12	9.9	.36	.42	63.6	69.4	.2096	602485
9	15985	21633	-1.1067A	.0175	.99	-.6	.96	-2.3	.46	.37	78.3	78.5	.1877	602488
10	14414	21633	-.5242A	.0159	.97	-4.3	.94	-5.0	.44	.41	73.2	72.5	.0216	602489
11	18755	21633	-1.6629A	.0199	.75	-9.9	.61	-9.9	.44	.33	88.0	84.5	-.2339	602490
12	16560	21633	-1.0566A	.0173	.98	-1.8	.98	-1.0	.37	.37	78.8	78.0	-.0354	602491
13	17003	21633	-.7900A	.0165	.80	-9.9	.73	-9.9	.44	.39	81.8	75.1	-.4520	602492
14	13786	21633	-.3227A	.0156	.96	-5.6	.94	-5.9	.44	.41	72.2	70.9	-.0248	602493
15	13203	21635	-.2709A	.0155	1.10	9.9	1.17	9.9	.34	.42	66.7	70.5	.0644	602495
16	16923	21635	-1.4210A	.0187	1.04	3.3	.90	-5.1	.44	.35	80.1	82.0	.2216	602496
17	9366	21635	.6248A	.0152	1.01	1.6	1.03	3.5	.41	.43	69.0	68.7	.0510	602498
18	14606	21635	-.7984A	.0165	1.11	9.9	1.13	9.2	.39	.39	71.7	75.2	.2500	602500
19	13353	21635	.1428A	.0151	.99	-1.5	.98	-2.1	.42	.43	68.6	68.5	-.3859	602501
20	17868	21633	-1.8944A	.0213	1.14	9.7	.92	-3.1	.44	.30	83.3	86.9	.3736	602506
21	16433	21633	-1.1015A	.0175	.99	-.5	.94	-3.4	.40	.37	78.1	78.4	.0495	602509
22	11180	21633	.1651A	.0151	1.20	9.9	1.29	9.9	.25	.43	60.2	68.5	.0959	602510
23	17359	21633	-1.6572A	.0199	1.11	8.6	1.06	2.7	.42	.33	81.5	84.5	.3157	602511
24	19301	21633	-2.2383A	.0237	.92	-4.7	.72	-9.8	.41	.27	89.4	89.9	.0841	602512
25	14779	21633	-.7099A	.0163	.99	-1.6	.93	-5.3	.45	.40	73.7	74.3	.1156	602513
26	9488	21633	.5744A	.0152	1.07	9.9	1.12	9.9	.36	.43	66.2	68.6	.0730	633235
27	15089	21633	-.8675A	.0167	1.13	9.9	1.24	9.9	.34	.39	72.7	75.9	.1935	633238
28	12664	21633	-.2911A	.0155	1.03	5.2	1.06	5.7	.43	.42	69.6	70.7	.2118	633240

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
29	10469	21633	.9236A	.0155	1.15	9.9	1.25	9.9	.38	.42	64.8	70.3	-.4909	633241
30	13371	21633	-.3325A	.0156	1.10	9.9	1.10	8.9	.35	.41	66.3	71.0	.0859	633243
31	17680	21633	-1.7206A	.0203	1.05	4.3	.86	-6.2	.45	.32	82.7	85.1	.2669	633244
32	17041	21635	-1.2925A	.0182	.97	-3.4	.84	-9.0	.42	.36	80.1	80.6	.0522	633267
33	15555	21635	-.9401A	.0169	1.03	4.1	1.02	1.6	.41	.38	75.8	76.7	.1407	633272
34	6926	21635	1.1344A	.0158	1.07	9.6	1.16	9.9	.32	.42	70.6	71.9	.1309	633273
35	16387	21635	-.6003A	.0161	.87	-9.9	.80	-9.9	.41	.40	77.0	73.2	-.4485	633274
36	16304	21635	-1.1238A	.0175	1.05	5.6	1.00	-.2	.38	.37	76.8	78.7	.1118	633278
37	12414	21633	-.1654A	.0154	1.02	3.4	1.04	4.1	.42	.42	69.4	69.8	.1438	633281
38	18708	21633	-1.7172A	.0202	.81	-9.9	.61	-9.9	.42	.32	87.4	85.1	-.1557	633282
39	17956	21633	-1.4057A	.0187	.79	-9.9	.61	-9.9	.47	.35	84.9	81.8	-.1595	633283
40	13762	21633	-.4757A	.0158	1.11	9.9	1.13	9.9	.35	.41	67.6	72.1	.1353	633284
41	16961	21633	-1.0213A	.0172	.84	-9.9	.73	-9.9	.45	.38	81.4	77.6	-.1999	633287
42	18646	21633	-1.8243A	.0209	.94	-4.2	.89	-4.5	.35	.31	86.7	86.2	-.0166	633291
43	15262	21633	-.7327A	.0164	.94	-8.2	.88	-9.2	.46	.39	75.6	74.5	.0103	633293
44	14147	21635	-.4981A	.0159	1.10	9.9	1.10	8.5	.34	.41	68.2	72.3	.0629	633297
45	13438	21635	.0207A	.0152	1.00	.4	.99	-1.5	.40	.42	68.6	68.9	-.2846	633299
46	19088	21635	-1.7804A	.0206	.79	-9.9	.64	-9.9	.37	.31	88.6	85.8	-.2753	633302
47	18220	21635	-1.2774A	.0181	.75	-9.9	.61	-9.9	.43	.36	86.0	80.4	-.3984	633303
48	12547	21635	.3836A	.0151	1.08	9.9	1.12	9.9	.37	.43	65.4	68.3	-.4341	633305
49	2917	3762	-1.0391	.0422	1.06	2.8	1.14	3.3	.29	.36	78.4	79.0	-.0004	645741
50	638	3762	2.3434	.0467	1.09	3.1	1.78	9.9	.19	.34	83.9	83.9	.0002	645742
51	2474	3762	-.3432	.0377	.90	-6.4	.85	-6.0	.49	.40	75.1	71.6	-.0003	645744
52	3100	3762	-1.3925	.0459	.93	-2.8	.83	-3.6	.41	.33	84.0	83.0	-.0004	645745
53	2942	3762	-1.0842	.0427	.91	-4.2	.84	-4.1	.44	.36	81.2	79.6	-.0004	645746
54	2546	3762	-.4466	.0382	1.09	5.1	1.21	7.1	.30	.39	70.7	72.6	-.0003	645747
55	2882	3762	-.9775	.0417	.81	-9.2	.67	-9.7	.54	.36	81.8	78.3	-.0003	645750
56	3175	3762	-1.5574	.0479	.94	-2.2	.80	-3.9	.39	.32	85.3	84.7	-.0004	645751
57	3313	3762	-1.9073	.0531	.94	-1.6	.82	-2.8	.35	.29	88.3	88.2	-.0004	645752
58	2018	3762	.2702	.0360	1.22	9.9	1.34	9.9	.21	.42	59.9	67.9	-.0001	645754
59	1745	3709	.5723	.0363	1.03	2.0	1.04	1.9	.39	.42	67.0	67.8	.0017	645755
60	3031	3709	-1.3581	.0456	1.06	2.1	1.12	2.5	.28	.34	81.5	82.4	.0013	645756
61	2296	3709	-.1605	.0372	1.03	2.2	1.03	1.1	.38	.41	68.8	70.0	.0015	645757
62	3338	3709	-2.1460	.0575	.90	-2.4	.76	-3.5	.37	.27	90.0	90.0	.0012	645758
63	1471	3709	.9380	.0369	1.12	8.3	1.23	9.9	.29	.41	65.6	69.3	.0017	645760
64	3167	3709	-1.6638	.0495	.93	-2.2	.83	-3.2	.38	.31	86.0	85.6	.0011	645761
65	2673	3709	-.7148	.0399	1.03	1.8	1.11	3.3	.34	.38	75.4	75.3	.0013	645762
66	2325	3709	-.2007	.0373	.92	-5.1	.93	-2.8	.47	.41	74.0	70.3	.0015	645763
67	2488	3709	-.4331	.0383	.93	-4.1	.88	-4.5	.46	.40	74.4	72.4	.0014	645764
68	895	3709	1.8061	.0416	1.21	9.4	1.55	9.9	.15	.37	73.9	77.9	.0019	645767
69	4412	6695	-.6664	.0285	.97	-2.9	.97	-1.2	.44	.41	73.8	72.0	-.0015	645769
70	4073	6695	-.3985	.0278	1.17	9.9	1.29	9.9	.28	.43	64.8	70.2	-.0015	645771
71	4757	6695	-.9561	.0296	.90	-8.0	.86	-5.9	.48	.39	77.8	74.6	-.0016	645772
72	5514	6695	-1.7131	.0344	.92	-4.2	.78	-6.1	.41	.33	83.6	82.8	-.0018	645773
73	2680	6695	.6532	.0279	1.05	4.6	1.12	6.8	.39	.44	69.6	70.6	-.0013	645774
74	4288	6695	-.5669	.0282	1.04	3.6	1.02	1.2	.39	.42	68.9	71.2	-.0015	645775
75	4521	6695	-.7557	.0288	1.04	2.9	1.05	2.2	.37	.41	72.2	72.7	-.0015	645776
76	3856	6695	-.2325	.0275	.97	-2.9	.94	-3.4	.46	.43	70.7	69.5	-.0015	645777
77	4763	6695	-.9614	.0296	.95	-3.9	.91	-3.8	.44	.39	75.7	74.6	-.0016	645778
78	5075	6695	-1.2473	.0310	.97	-1.6	1.12	3.9	.37	.37	79.5	77.6	-.0017	645779
79	2734	3752	-.7764	.0402	.92	-4.3	.82	-5.5	.47	.39	77.3	76.0	.0005	645822
80	2363	3752	-.2221	.0374	1.04	2.6	1.05	2.1	.38	.42	69.5	70.9	.0006	645823
81	2226	3752	-.0331	.0369	1.04	3.0	1.05	2.0	.39	.43	68.3	69.7	.0007	645824
82	2258	3752	-.0768	.0370	1.02	1.5	1.04	1.6	.40	.42	69.4	69.9	.0007	645825
83	3267	3752	-1.8479	.0517	.89	-3.4	.73	-4.6	.41	.31	87.4	87.2	.0004	645826
84	3335	3752	-2.0406	.0549	.87	-3.6	.79	-3.1	.41	.29	89.2	88.9	.0004	645827
85	1925	3752	.3691	.0364	1.03	2.4	1.06	3.1	.40	.43	67.6	68.6	.0008	645828
86	2512	3752	-.4355	.0383	.93	-4.0	.89	-3.9	.47	.41	74.6	72.6	.0006	645829
87	805	3752	2.0231	.0435	1.10	4.0	1.56	9.9	.26	.39	79.7	80.3	.0010	645830
88	3146	3752	-1.5511	.0476	.88	-4.3	.66	-6.9	.45	.33	84.9	84.3	.0004	645833

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
89	1098	3717	1.4444	.0391	1.35	9.9	1.79	9.9	.00	.38	65.9	73.9	.0027	645837
90	1272	3717	1.1886	.0377	1.25	9.9	1.46	9.9	.14	.39	63.6	71.2	.0027	645838
91	2521	3717	-.4893	.0383	1.01	.9	1.00	.2	.38	.39	72.1	72.5	.0023	645839
92	3383	3717	-2.2778	.0599	.88	-2.8	.62	-5.8	.39	.25	91.1	91.0	.0020	645840
93	2387	3717	-.2978	.0374	.94	-4.1	.89	-4.6	.46	.40	72.8	70.7	.0023	645841
94	2672	3717	-.7177	.0396	.99	-.4	1.04	1.2	.37	.38	76.4	74.9	.0022	645842
95	2277	3717	-.1462	.0369	1.03	1.8	1.03	1.3	.38	.40	68.1	69.5	.0023	645843
96	1780	3717	.5066	.0360	1.18	9.9	1.26	9.9	.23	.41	59.6	67.3	.0025	645844
97	1558	3717	.7973	.0364	1.03	2.0	1.07	3.4	.37	.41	67.3	68.2	.0026	645847
98	3220	3717	-1.7854	.0510	1.00	.1	1.02	.4	.30	.30	86.7	86.8	.0021	645848

Grade 6 Reading

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
1	17923	21389	-1.7569A	.0204	.96	-3.4	.86	-6.1	.41	.32	85.2	85.2	.0919	563699
2	14803	21389	-.3867A	.0157	.85	-9.9	.79	-9.9	.49	.42	77.1	71.2	-.2999	563790
3	18147	21389	-1.4791A	.0190	.76	-9.9	.62	-9.9	.44	.35	86.7	82.3	-.2883	563791
4	17449	21389	-1.5823A	.0195	1.00	-.3	.96	-1.9	.39	.34	83.2	83.4	.0966	563801
5	16408	21389	-1.4196A	.0187	1.21	9.9	1.29	9.9	.32	.35	77.3	81.6	.2838	563802
6	13533	21389	-.6356A	.0162	1.20	9.9	1.33	9.9	.31	.40	67.5	73.3	.2791	563852
7	16963	21389	-1.5700A	.0194	1.20	9.9	1.40	9.9	.30	.34	79.8	83.2	.2556	563855
8	15361	21389	-1.0678A	.0174	1.10	9.9	1.10	5.7	.40	.38	74.6	77.7	.2372	563857
9	9637	21389	.4737A	.0152	1.00	.9	1.04	4.1	.42	.43	69.2	68.6	.0827	563866
10	14506	21389	-.6637A	.0163	1.06	8.3	1.12	9.3	.36	.40	72.0	73.6	.0598	565377
11	18417	21389	-1.8714A	.0211	.94	-4.6	.87	-5.4	.37	.31	86.9	86.3	-.0028	565521
12	16467	21389	-1.4156A	.0187	1.18	9.9	1.29	9.9	.33	.35	77.9	81.6	.2611	565525
13	20228	21389	-2.5879A	.0266	.64	-9.9	.40	-9.9	.33	.25	94.6	92.2	-.4406	565533
14	18437	21389	-1.8522A	.0209	.89	-8.5	.81	-7.8	.39	.32	87.2	86.1	-.0318	565798
15	17627	21389	-1.4321A	.0188	.94	-5.9	.91	-4.4	.35	.35	83.3	81.7	-.1248	565832
16	17104	21389	-1.2167A	.0179	.81	-9.9	.67	-9.9	.48	.37	83.5	79.4	-.1541	602543
17	6889	21389	1.3112A	.0164	1.04	5.3	1.18	9.9	.39	.41	73.6	74.1	-.0800	602545
18	13340	21389	-.5047A	.0159	1.06	8.0	1.07	5.6	.41	.41	70.1	72.1	.1947	602546
19	16801	21389	-1.4605A	.0189	1.14	9.9	1.22	9.9	.33	.35	79.6	82.0	.1988	602548
20	15729	21389	-.6366A	.0162	.94	-8.4	.95	-4.2	.37	.40	76.2	73.3	-.3074	602549
21	16631	21389	-1.4264A	.0187	1.04	4.1	1.02	1.0	.42	.35	80.0	81.7	.2199	602550
22	16648	21389	-.9851A	.0171	.88	-9.9	.82	-9.9	.40	.38	79.9	76.8	-.2370	602552
23	15340	21389	-.8952A	.0168	1.08	9.9	1.14	9.0	.34	.39	73.7	75.9	.0680	602553
24	12635	21391	-.5166A	.0160	1.17	9.9	1.25	9.9	.36	.41	66.0	72.2	.3771	602562
25	13448	21391	-.2852A	.0156	1.09	9.9	1.14	9.9	.33	.42	66.7	70.4	-.0529	602563
26	14382	21391	-.6943A	.0163	1.07	8.8	1.08	6.0	.38	.40	71.7	73.9	.1235	602564
27	13486	21391	-.3513A	.0157	1.06	9.7	1.09	8.0	.36	.42	68.4	70.9	.0044	602568
28	13642	21391	-.2604A	.0156	.96	-5.9	.93	-7.4	.44	.42	71.0	70.3	-.1260	602569
29	17635	21391	-1.3039A	.0182	.79	-9.9	.65	-9.9	.45	.36	84.3	80.3	-.2597	602570
30	17257	21391	-1.4914A	.0190	.96	-4.0	.87	-6.6	.42	.35	82.6	82.4	.0740	602571
31	10039	21391	.4892A	.0153	1.02	4.1	1.07	8.4	.41	.43	68.4	68.6	-.0254	602573
32	16560	21391	-1.0243A	.0172	1.05	5.6	1.25	9.9	.25	.38	77.5	77.3	-.1674	632742
33	10858	21391	.2052A	.0152	.92	-9.9	.91	-9.9	.50	.43	72.6	68.4	.0684	632747
34	15199	21391	-.6997A	.0163	1.01	1.0	.99	-.9	.37	.40	73.2	73.9	-.0908	632750
35	10563	21391	.3715A	.0152	1.12	9.9	1.18	9.9	.32	.43	63.2	68.4	-.0293	632752
36	16960	21391	-1.3055A	.0182	.84	-9.9	.66	-9.9	.51	.36	82.5	80.4	-.0124	632754
37	8496	21391	.7354A	.0154	1.04	6.1	1.11	9.9	.38	.43	69.0	69.6	.0910	632772
38	15566	21391	-.6974A	.0163	.92	-9.9	.86	-9.9	.42	.40	76.4	73.9	-.1974	632774
39	15082	21391	-.6775A	.0163	.96	-5.4	.89	-8.6	.42	.40	73.9	73.7	-.0810	632775
40	17914	21391	-1.5103A	.0191	.84	-9.9	.69	-9.9	.42	.34	85.0	82.6	-.1571	632777
41	11782	21391	.1511A	.0152	1.01	1.8	1.01	1.4	.42	.43	67.9	68.5	-.0917	632778

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
42	17459	21391	-1.4418A	.0188	1.05	4.2	1.20	9.0	.27	.35	82.2	81.8	-.0506	632781
43	10892	21391	.3425A	.0152	1.00	.2	1.02	1.8	.43	.43	69.1	68.4	-.0762	632785
44	12234	21391	.0784A	.0153	1.06	9.9	1.09	9.7	.36	.43	65.9	68.7	-.1250	632787
45	7695	21391	1.0315A	.0158	1.07	9.9	1.23	9.9	.35	.42	70.5	71.5	-.0077	632788
46	16520	21391	-1.2106A	.0179	.89	-9.9	.73	-9.9	.49	.37	80.4	79.3	.0362	632789
47	15683	21391	-1.0549A	.0173	.97	-3.1	.90	-6.5	.46	.38	77.5	77.6	.1325	632792
48	9826	21391	.5462A	.0153	1.05	8.4	1.08	9.1	.39	.43	66.6	68.7	-.0327	632796
49	1553	3612	.7345	.0373	.99	-1.0	1.03	1.2	.43	.43	70.1	69.1	.0011	645851
50	1598	3612	.6721	.0372	1.06	4.1	1.11	5.0	.37	.43	67.2	68.8	.0011	645852
51	2207	3612	-.1682	.0377	1.03	2.0	1.03	1.1	.39	.42	68.5	70.0	.0009	645853
52	2118	3612	-.0426	.0374	1.14	9.2	1.19	8.0	.30	.42	63.8	69.3	.0009	645854
53	2958	3612	-1.4274	.0464	1.01	.5	1.04	.7	.32	.34	82.3	82.5	.0006	645855
54	1352	3612	1.0199	.0381	1.06	3.8	1.10	4.0	.37	.43	69.1	70.8	.0012	645856
55	3299	3612	-2.3760	.0618	.89	-2.4	.66	-4.6	.36	.25	91.4	91.3	.0005	645858
56	3187	3612	-2.0006	.0545	.97	-.8	1.00	.1	.30	.29	88.3	88.3	.0005	645859
57	3039	3612	-1.6101	.0487	.88	-4.1	.75	-4.7	.43	.32	85.3	84.4	.0005	645860
58	3072	3612	-1.6899	.0497	.89	-3.6	.73	-5.0	.42	.31	85.6	85.3	.0006	645862
59	1367	3517	.9312	.0383	1.06	3.9	1.16	6.6	.35	.42	70.5	70.2	.0015	645864
60	1681	3517	.4843	.0374	1.05	3.5	1.08	3.7	.38	.42	66.2	68.0	.0014	645865
61	3002	3517	-1.7115	.0507	.93	-2.3	.81	-3.4	.38	.31	86.7	85.6	.0011	645866
62	2247	3517	-.3174	.0385	.90	-6.4	.84	-6.3	.49	.40	73.8	70.5	.0013	645868
63	3012	3517	-1.7373	.0511	.95	-1.5	.91	-1.4	.34	.30	86.2	85.9	.0010	645870
64	1803	3517	.3144	.0373	1.13	8.9	1.16	7.2	.31	.42	62.0	67.8	.0014	645871
65	3005	3517	-1.7191	.0508	.95	-1.6	.96	-.7	.35	.30	86.0	85.7	.0011	645872
66	2451	3517	-.6314	.0401	.99	-.5	1.02	.6	.39	.38	74.1	73.5	.0012	645873
67	1686	3517	.4774	.0374	.90	-7.2	.90	-5.2	.50	.42	73.1	68.0	.0014	645878
68	1963	3517	.0910	.0375	1.06	4.2	1.09	3.8	.36	.42	66.0	68.1	.0014	645880
69	5046	6897	-1.0817	.0300	.98	-1.3	.94	-2.1	.42	.40	76.7	76.5	-.0017	645881
70	5414	6897	-1.4339	.0320	1.04	2.5	1.17	4.8	.33	.38	79.3	80.0	-.0018	645885
71	5613	6897	-1.6477	.0336	.92	-4.1	.82	-4.9	.43	.36	83.2	82.3	-.0019	645886
72	6068	6897	-2.2442	.0394	.84	-6.5	.57	-9.6	.45	.31	88.6	88.1	-.0019	645887
73	3791	6897	-.0836	.0272	1.09	8.3	1.13	7.3	.37	.45	66.0	69.6	-.0014	645888
74	3828	6897	-.1109	.0272	.93	-6.5	.90	-6.1	.50	.45	72.5	69.7	-.0014	645889
75	2172	6897	1.1435	.0289	1.05	4.0	1.18	7.4	.38	.43	73.0	74.1	-.0010	645890
76	4624	6897	-.7221	.0285	1.01	.6	1.06	2.6	.41	.42	73.9	73.2	-.0017	645891
77	5059	6897	-1.0934	.0300	.92	-5.4	.88	-4.7	.46	.40	79.2	76.6	-.0017	645894
78	5213	6897	-1.2358	.0308	.92	-5.3	.86	-4.9	.46	.39	79.8	78.0	-.0017	645895
79	534	3694	2.4908	.0500	1.33	9.5	2.85	9.9	-.10	.33	84.7	86.0	.0018	645898
80	3194	3694	-1.8244	.0510	.87	-4.3	.62	-7.3	.45	.30	87.0	86.6	.0002	645899
81	944	3694	1.6653	.0411	1.02	1.0	1.14	3.9	.35	.38	76.5	76.9	.0016	645900
82	3074	3694	-1.5373	.0471	1.02	.8	1.25	4.6	.28	.33	83.9	83.6	.0003	645901
83	3299	3694	-2.1232	.0560	.91	-2.4	.64	-5.8	.39	.28	89.5	89.3	.0004	645902
84	2251	3694	-.1703	.0372	.91	-6.6	.86	-6.3	.50	.41	73.4	69.8	.0008	645904
85	2071	3694	.0741	.0366	1.04	3.0	1.05	2.4	.38	.42	66.9	68.5	.0010	645905
86	1469	3694	.8782	.0371	1.01	1.0	1.09	4.0	.39	.42	70.3	69.6	.0013	645906
87	2434	3694	-.4289	.0381	1.03	2.0	1.03	1.2	.38	.40	70.4	71.8	.0007	645908
88	3291	3694	-2.0983	.0555	.92	-2.2	.76	-3.6	.37	.28	89.3	89.1	.0003	645910
89	2776	3669	-.9846	.0416	1.05	2.4	1.02	.6	.32	.36	75.7	77.4	.0000	646001
90	3130	3669	-1.7017	.0495	.98	-.7	.89	-2.0	.34	.31	85.5	85.5	-.0001	646002
91	1926	3669	.2540	.0365	.97	-2.5	.97	-1.6	.44	.42	69.9	67.7	.0002	646003
92	2440	3669	-.4539	.0383	.94	-4.0	.92	-3.1	.45	.39	74.0	71.8	.0001	646004
93	2325	3669	-.2886	.0376	1.12	7.5	1.22	8.2	.29	.40	66.3	70.4	.0001	646006
94	2146	3669	-.0410	.0369	1.00	.1	1.00	.1	.41	.41	68.7	68.8	.0001	646007
95	1958	3669	.2114	.0365	1.11	8.0	1.16	7.4	.31	.42	62.7	67.8	.0002	646008
96	2851	3669	-1.1180	.0428	.94	-2.7	.85	-3.9	.42	.35	79.8	79.0	.0000	646010
97	2508	3669	-.5547	.0388	1.27	9.9	1.49	9.9	.13	.39	65.2	72.8	.0000	646012
98	3261	3669	-2.0577	.0552	.92	-2.1	.78	-3.3	.36	.27	89.2	88.9	.0001	646013

Grade 7 Reading

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
1	11284	20974	-.3548A	.0158	1.29	9.9	1.41	9.9	.28	.42	59.9	71.0	.4795	564046
2	17348	20974	-1.5115A	.0193	1.03	2.6	1.30	9.9	.26	.34	83.4	82.5	-.0662	564050
3	18242	20974	-2.1724A	.0233	1.13	7.7	1.23	7.2	.32	.28	87.1	89.0	.2216	564051
4	19699	20974	-2.2295A	.0237	.64	-9.9	.57	-9.9	.25	.28	94.0	89.5	-.6788	564052
5	12476	20974	-.1134A	.0156	1.07	9.9	1.10	9.9	.36	.43	66.5	69.5	-.0490	564056
6	15230	20974	-.4789A	.0160	.84	-9.9	.76	-9.9	.47	.41	78.0	72.0	-.4098	602587
7	15188	20974	-.9655A	.0172	1.09	9.9	1.12	7.6	.34	.38	74.6	76.6	.0980	602589
8	9989	20974	.3321A	.0154	1.16	9.9	1.25	9.9	.29	.43	62.4	68.5	.0970	602591
9	11451	20974	-.1272A	.0156	1.18	9.9	1.24	9.9	.30	.43	62.5	69.6	.2115	602592
10	14115	20974	-.4832A	.0160	1.04	6.1	1.09	7.7	.35	.41	71.4	72.0	-.0932	602593
11	15763	20974	-1.2186A	.0181	1.02	1.6	.93	-4.1	.44	.37	78.0	79.3	.1834	602597
12	16193	20970	-1.1135A	.0177	.91	-9.9	.80	-9.9	.44	.37	79.9	78.2	-.0615	602624
13	14786	20970	-.8499A	.0169	1.13	9.9	1.21	9.9	.31	.39	71.9	75.4	.0944	602625
14	10233	20970	.3717A	.0154	.95	-9.1	.94	-7.6	.48	.43	70.6	68.5	.0000	602626
15	12868	20970	-.4415A	.0160	1.08	9.9	1.09	7.6	.39	.41	68.2	71.7	.1840	602630
16	18402	20970	-1.8387A	.0211	.74	-9.9	.51	-9.9	.46	.31	88.5	85.9	-.2040	602631
17	10019	20970	.2673A	.0154	.95	-8.9	.95	-6.5	.48	.43	71.2	68.5	.1543	602633
18	13783	20970	-.7468A	.0166	1.14	9.9	1.20	9.9	.36	.40	69.9	74.3	.2601	602634
19	16794	20970	-1.3409A	.0185	.91	-9.5	.78	-9.9	.43	.36	81.7	80.6	-.0343	602635
20	16410	20970	-1.0724A	.0175	.96	-4.4	.98	-.9	.34	.38	79.6	77.7	-.1763	602636
21	12140	20974	-.3701A	.0159	1.09	9.9	1.11	9.7	.41	.42	67.5	71.1	.2906	633139
22	19156	20974	-2.2458A	.0238	.78	-9.9	.62	-9.9	.35	.28	91.4	89.7	-.2245	633142
23	10895	20974	.6636A	.0155	1.12	9.9	1.17	9.9	.38	.43	64.7	69.2	-.4417	633144
24	17293	20974	-1.3168A	.0184	.86	-9.9	.84	-8.9	.37	.36	84.1	80.4	-.2455	633145
25	18082	20974	-1.6799A	.0201	.80	-9.9	.64	-9.9	.41	.33	87.3	84.3	-.2088	633151
26	14381	20970	-.7192A	.0165	1.02	3.3	1.00	.0	.41	.40	72.7	74.1	.0736	633152
27	15118	20970	-.8918A	.0170	.96	-5.5	.90	-7.2	.45	.39	76.4	75.8	.0425	633154
28	11902	20970	.2560A	.0154	1.03	4.8	1.03	3.7	.41	.43	67.0	68.5	-.2791	633155
29	13312	20970	-.1363A	.0156	.95	-8.1	.92	-8.7	.44	.43	71.6	69.7	-.2346	633157
30	17884	20970	-1.4546A	.0190	.73	-9.9	.59	-9.9	.44	.35	87.0	81.9	-.3536	633159
31	14921	20970	-.8438A	.0169	.90	-9.9	.78	-9.9	.51	.39	76.7	75.3	.0503	633161
32	14551	20970	-.2248A	.0157	.84	-9.9	.78	-9.9	.50	.42	76.4	70.1	-.4736	633165
33	7377	20970	1.0334A	.0160	.97	-4.6	1.05	4.8	.43	.42	74.2	71.5	.0328	633173
34	12357	20970	-.3125A	.0158	1.09	9.9	1.15	9.9	.37	.42	67.4	70.7	.1796	633176
35	10770	20970	.0214A	.0155	.96	-6.1	.94	-6.4	.48	.43	70.2	69.0	.2232	633177
36	7309	20970	.9806A	.0159	1.13	9.9	1.27	9.9	.28	.43	67.3	71.1	.1020	633178
37	14786	20970	-.7856A	.0167	.86	-9.9	.76	-9.9	.53	.40	77.8	74.7	.0291	633182
38	12745	20970	-.1564A	.0156	1.01	1.7	1.00	.0	.41	.42	68.9	69.8	-.0724	633183
39	18431	20974	-1.9085A	.0215	.79	-9.9	.56	-9.9	.43	.31	88.4	86.6	-.1446	633190
40	15311	20974	-1.0998A	.0176	1.02	2.5	.96	-2.6	.45	.38	76.2	78.0	.1985	633194
41	17290	20974	-1.4840A	.0192	.91	-8.0	.83	-8.7	.39	.35	83.5	82.2	-.0716	633197
42	14001	20974	-.5871A	.0162	1.04	5.7	1.03	2.7	.39	.41	71.4	72.9	.0421	633198
43	10735	20974	.0673A	.0154	1.04	7.5	1.07	7.3	.41	.43	67.2	68.8	.1859	633199
44	11504	20970	.1254A	.0154	.97	-5.2	.96	-4.7	.45	.43	70.0	68.7	-.0543	633204
45	13503	20970	-.5688A	.0162	1.07	9.9	1.10	8.0	.39	.41	70.3	72.7	.1525	633208
46	12906	20970	-.2289A	.0157	1.11	9.9	1.15	9.9	.32	.42	66.0	70.2	-.0396	633209
47	15541	20970	-1.0064A	.0173	1.01	.9	.95	-3.4	.40	.38	76.0	77.0	.0342	633214
48	16744	20970	-1.3907A	.0188	.93	-7.0	.86	-7.4	.43	.35	82.1	81.2	.0347	633215
49	1392	3625	.9269	.0376	1.25	9.9	1.46	9.9	.17	.41	60.1	69.7	.0000	645918
50	1787	3625	.3851	.0367	1.05	3.4	1.06	2.9	.38	.42	66.2	67.9	.0000	645919
51	3106	3625	-1.7744	.0504	.96	-1.1	1.11	1.9	.31	.31	86.6	85.9	-.0004	645921
52	2598	3625	-.7735	.0402	1.02	1.0	1.08	2.3	.36	.38	75.3	75.0	-.0002	645922
53	2596	3625	-.7703	.0402	1.02	1.0	1.03	1.0	.37	.38	73.6	74.9	-.0002	645923
54	2864	3625	-1.2418	.0440	.94	-2.7	.91	-2.1	.41	.35	82.0	80.1	-.0003	645924
55	3004	3625	-1.5320	.0472	.97	-1.0	1.00	.1	.35	.33	83.8	83.3	-.0003	645925
56	2611	3625	-.7946	.0404	.88	-6.3	.79	-6.8	.49	.38	77.8	75.2	-.0002	645926
57	3283	3625	-2.3005	.0595	.91	-2.3	.75	-3.5	.35	.26	90.7	90.6	-.0003	645927
58	2823	3625	-1.1637	.0433	.93	-3.1	.83	-4.4	.43	.36	80.1	79.3	-.0003	645928
59	2452	3569	-.5827	.0395	1.04	2.4	1.07	2.3	.36	.39	71.9	73.1	.0008	645929

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
60	3184	3569	-2.1071	.0566	.86	-3.8	.61	-6.0	.41	.27	89.3	89.2	.0008	645931
61	2672	3569	-.9451	.0419	1.10	4.9	1.20	4.9	.27	.37	74.5	76.8	.0008	645932
62	2470	3569	-.6109	.0397	.98	-.9	.97	-1.0	.41	.39	74.1	73.3	.0008	645933
63	2198	3569	-.2036	.0379	1.06	3.9	1.07	2.6	.36	.41	68.0	70.0	.0008	645934
64	1390	3569	.9249	.0380	1.06	3.8	1.12	5.1	.36	.42	68.6	70.1	.0009	645936
65	2164	3569	-.1549	.0378	.95	-3.4	.93	-3.0	.46	.41	71.8	69.7	.0008	645937
66	2183	3569	-.1821	.0379	1.01	.5	1.06	2.4	.40	.41	70.4	69.8	.0008	645938
67	1734	3569	.4427	.0371	1.06	4.6	1.11	5.4	.36	.43	66.4	68.1	.0009	645940
68	2569	3569	-.7702	.0406	1.01	.5	.95	-1.5	.38	.38	73.6	74.9	.0007	645941
69	3373	3727	-2.2840	.0589	.83	-4.4	.48	-8.2	.45	.28	90.7	90.5	-.0006	645957
70	3208	3727	-1.7953	.0506	.97	-.8	1.13	2.0	.33	.32	86.9	86.3	-.0007	645958
71	3184	3727	-1.7347	.0498	.95	-1.7	.82	-3.2	.38	.33	86.3	85.8	-.0008	645959
72	2877	3727	-1.0906	.0426	.97	-1.1	.88	-2.9	.41	.38	79.0	79.1	-.0006	645961
73	2215	3727	-.0698	.0371	1.05	3.5	1.06	2.6	.39	.43	67.8	70.0	-.0004	645962
74	1531	3727	.8524	.0371	1.02	1.2	1.08	3.5	.41	.43	70.8	69.7	-.0003	645964
75	3123	3727	-1.5894	.0479	.96	-1.3	.97	-.4	.37	.34	84.9	84.3	-.0007	645965
76	3296	3727	-2.0374	.0544	.82	-5.1	.55	-7.5	.46	.30	89.0	88.5	-.0008	645967
77	2845	3727	-1.0331	.0422	.96	-2.1	.86	-3.7	.43	.38	79.2	78.5	-.0006	645969
78	2924	3727	-1.1777	.0434	.94	-2.5	.87	-3.1	.43	.37	80.8	80.0	-.0006	645970
79	5313	6427	-1.7356	.0354	.86	-7.2	.65	-9.6	.47	.34	84.3	83.1	-.0017	646028
80	4369	6427	-.7723	.0295	1.03	2.4	1.05	2.0	.39	.41	71.9	73.2	-.0016	646029
81	5125	6427	-1.5121	.0336	.89	-6.4	.76	-7.2	.46	.36	82.6	80.6	-.0017	646030
82	2047	6427	1.1118	.0298	1.31	9.9	1.68	9.9	.14	.43	65.9	73.9	-.0011	646031
83	4846	6427	-1.2162	.0316	.95	-3.3	.89	-3.9	.43	.38	78.6	77.4	-.0016	646032
84	5468	6427	-1.9406	.0374	.88	-5.6	.69	-7.6	.43	.32	86.1	85.3	-.0016	646033
85	3744	6427	-.2546	.0282	.93	-6.1	.90	-6.0	.49	.44	72.4	69.9	-.0014	646034
86	4160	6427	-.5936	.0290	.94	-4.7	.89	-5.4	.47	.42	73.3	71.9	-.0015	646035
87	4402	6427	-.8013	.0297	.88	-9.2	.80	-9.0	.51	.41	76.4	73.4	-.0015	646036
88	4494	6427	-.8831	.0300	1.06	4.4	1.12	4.6	.35	.41	73.4	74.2	-.0016	646037
89	2076	3626	.0237	.0370	.92	-5.7	.89	-5.4	.49	.42	72.4	68.7	.0014	646038
90	3187	3626	-1.9530	.0537	.88	-3.4	.67	-5.6	.41	.29	88.2	87.9	.0013	646040
91	2104	3626	-.0148	.0371	.94	-4.1	.92	-4.1	.47	.42	71.1	68.9	.0014	646041
92	1425	3626	.9100	.0375	1.28	9.9	1.44	9.9	.15	.42	59.2	69.7	.0015	646042
93	2755	3626	-1.0051	.0421	.90	-5.0	.85	-4.1	.46	.37	80.8	77.7	.0013	646043
94	1680	3626	.5593	.0368	1.14	9.6	1.19	9.2	.29	.42	62.1	68.2	.0015	646044
95	2431	3626	-.4816	.0387	.94	-3.4	.88	-4.6	.46	.40	73.1	72.2	.0013	646045
96	2279	3626	-.2597	.0378	.98	-1.3	.94	-2.5	.43	.41	70.3	70.4	.0014	646047
97	2511	3626	-.6032	.0393	1.09	4.9	1.18	5.7	.30	.39	70.2	73.4	.0013	646050
98	2216	3626	-.1705	.0375	1.07	4.4	1.08	3.5	.35	.41	66.9	69.7	.0014	646051

Grade 8 Reading

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
1	11302	20764	-.5646A	.0159	1.26	9.9	1.35	9.9	.30	.40	61.2	71.2	.5276	564222
2	19040	20764	-2.2217A	.0230	.65	-9.9	.45	-9.9	.41	.28	91.9	88.7	-.3999	564224
3	17298	20764	-1.7893A	.0202	1.09	7.2	1.24	9.9	.26	.32	83.8	84.4	.0663	564226
4	12547	20764	-.6396A	.0160	1.09	9.9	1.07	6.9	.41	.40	67.1	71.8	.3073	565758
5	18449	20764	-2.0780A	.0220	.85	-9.9	.81	-8.2	.33	.30	89.1	87.3	-.1769	565810
6	12968	20764	-.4534A	.0157	.97	-5.5	.94	-6.6	.44	.40	71.3	70.3	.0171	602752
7	16953	20764	-1.6011A	.0192	.98	-1.7	.91	-5.0	.37	.34	82.4	82.3	.0079	602754
8	13672	20764	-.6009A	.0160	.99	-1.2	1.01	.9	.40	.40	72.4	71.5	-.0121	602755
9	13105	20764	-.5052A	.0158	.95	-8.0	.92	-9.0	.46	.40	72.8	70.7	.0352	602759
10	14697	20764	-1.4180A	.0184	1.21	9.9	1.14	7.8	.47	.35	73.8	80.2	.5379	602763
11	10333	20764	.0901A	.0153	.99	-2.3	.99	-1.4	.42	.41	68.3	67.5	.0974	602765
12	13652	20764	-.6454A	.0161	.98	-2.2	.97	-3.2	.42	.40	72.1	71.9	.0378	602766
13	11636	20764	-.1802A	.0154	1.14	9.9	1.16	9.9	.29	.41	61.4	68.5	.0640	602767

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
14	15966	20764	-1.4753A	.0186	1.10	9.5	1.16	8.7	.36	.35	78.9	80.9	.2210	602769
15	15324	20764	-.9752A	.0169	.87	-9.9	.80	-9.9	.47	.38	78.7	75.2	-.0891	602771
16	11057	20764	.1370A	.0152	.97	-4.7	.98	-2.7	.43	.41	69.0	67.4	-.1163	602776
17	16322	20758	-1.2314A	.0177	.82	-9.9	.70	-9.9	.48	.36	82.4	78.1	-.1464	602779
18	12172	20758	-.2523A	.0155	1.06	9.4	1.05	5.9	.36	.41	65.7	68.9	.0084	602780
19	13871	20758	-.6195A	.0160	1.02	2.2	1.06	5.9	.36	.40	72.0	71.7	-.0460	602783
20	13214	20758	-.3246A	.0156	.96	-6.0	.94	-7.2	.41	.41	70.5	69.3	-.1740	602785
21	12290	20758	-.3602A	.0156	.92	-9.9	.88	-9.9	.50	.40	72.7	69.6	.0880	602786
22	11782	20758	-.3194A	.0155	1.02	4.0	1.01	1.6	.42	.41	67.7	69.3	.1682	602788
23	12857	20758	-.2612A	.0155	1.00	-.3	.99	-.6	.39	.41	69.2	68.9	-.1488	602789
24	11141	20758	.0650A	.0153	.98	-3.1	.98	-3.0	.42	.41	68.4	67.6	-.0651	602790
25	18736	20764	-1.9540A	.0212	.70	-9.9	.59	-9.9	.34	.31	90.7	86.1	-.4765	633319
26	18098	20764	-1.7481A	.0200	.82	-9.9	.81	-9.6	.31	.32	87.9	83.9	-.3343	633320
27	16672	20764	-1.4764A	.0187	.91	-8.9	.91	-5.1	.42	.35	82.9	80.9	-.0165	633322
28	7797	20764	.7152A	.0156	1.06	9.9	1.13	9.9	.32	.40	67.1	69.0	.0716	633323
29	18664	20764	-2.0250A	.0216	.78	-9.9	.74	-9.9	.30	.30	90.1	86.8	-.3575	633325
30	9827	20764	.3637A	.0153	1.13	9.9	1.18	9.9	.29	.41	62.0	67.5	-.0571	633327
31	12870	20758	-.2750A	.0155	.98	-3.3	.96	-4.2	.41	.41	69.6	69.0	-.1382	633343
32	10073	20758	.1641A	.0152	1.07	9.9	1.10	9.9	.34	.41	64.4	67.4	.0833	633346
33	14989	20758	-.7593A	.0163	.94	-8.2	.90	-8.6	.39	.39	74.9	73.0	-.2110	633347
34	14974	20758	-.9139A	.0167	1.04	4.7	1.06	4.6	.33	.38	73.8	74.6	-.0500	633348
35	8881	20758	.5413A	.0154	1.11	9.9	1.17	9.9	.30	.40	64.2	68.1	-.0140	633349
36	13949	20758	-.7363A	.0163	.98	-3.4	.97	-2.6	.43	.39	73.6	72.8	.0514	633351
37	13342	20758	-.5777A	.0159	1.12	9.9	1.21	9.9	.29	.40	67.6	71.3	.0478	633355
38	10508	20758	.3673A	.0153	1.03	6.2	1.06	7.6	.39	.41	66.5	67.5	-.2173	633356
39	17512	20758	-1.8873A	.0208	.93	-5.1	.78	-9.9	.44	.31	85.0	85.4	.0760	633357
40	14169	20758	-.6401A	.0161	.89	-9.9	.83	-9.9	.48	.40	75.5	71.8	-.1041	633361
41	16975	20758	-1.5696A	.0191	.94	-5.2	.86	-7.8	.38	.34	82.7	82.0	-.0344	633364
42	12326	20758	-.3994A	.0157	1.01	1.3	.99	-.9	.42	.40	69.1	69.9	.1188	633365
43	14044	20758	-.8186A	.0164	1.03	3.5	1.00	-.1	.41	.39	72.1	73.6	.1094	633370
44	17283	20758	-1.5034A	.0188	.80	-9.9	.66	-9.9	.44	.34	84.6	81.2	-.2236	633371
45	17839	20758	-1.9071A	.0209	.94	-4.7	.95	-2.4	.34	.31	86.5	85.6	-.0479	633372
46	12806	20758	-.1591A	.0154	1.00	-.5	.99	-1.2	.39	.41	68.4	68.4	-.2380	633374
47	14809	20758	-1.0272A	.0170	1.00	.2	.98	-1.1	.42	.38	75.5	75.8	.1117	633376
48	13185	20758	-.6552A	.0161	1.01	1.5	1.02	1.4	.43	.39	71.6	72.0	.1653	633378
49	12336	20758	-.2316A	.0155	1.07	9.9	1.10	9.9	.33	.41	65.6	68.8	-.0517	633380
50	15346	20758	-1.1289A	.0173	1.03	3.5	1.12	8.1	.35	.37	77.4	76.9	.0594	633383
51	1861	3520	.0962	.0371	.95	-3.9	.93	-3.7	.46	.41	70.7	67.7	.0002	645972
52	3144	3520	-2.2482	.0573	.94	-1.6	.75	-4.0	.36	.28	89.5	89.4	.0000	645973
53	2414	3520	-.7047	.0396	.94	-3.6	.90	-3.5	.45	.39	74.8	73.1	.0001	645975
54	2933	3520	-1.6714	.0483	.89	-4.0	.75	-5.3	.45	.33	84.3	83.7	-.0001	645976
55	3093	3520	-2.0894	.0545	.88	-3.5	.68	-5.6	.42	.29	88.2	87.9	-.0001	645977
56	2171	3520	-.3395	.0380	.98	-1.0	.96	-1.9	.42	.41	70.5	70.0	.0001	645980
57	1287	3520	.8982	.0383	1.27	9.9	1.42	9.9	.13	.40	60.8	70.0	.0002	645981
58	2534	3520	-.8987	.0408	.96	-2.2	.93	-2.3	.42	.38	76.8	75.1	.0001	645982
59	2398	3520	-.6796	.0395	.98	-1.0	.97	-1.0	.41	.39	73.8	72.8	.0001	645984
60	1688	3520	.3340	.0371	1.10	7.1	1.14	7.1	.31	.41	63.3	67.5	.0002	645985
61	2261	3523	-.4999	.0382	.99	-.4	1.03	1.5	.39	.39	70.9	70.3	.0015	646053
62	1858	3523	.0611	.0368	1.10	7.2	1.12	6.9	.30	.40	61.9	67.0	.0016	646055
63	769	3523	1.6796	.0434	1.37	9.9	2.12	9.9	-.14	.33	74.1	78.9	.0020	646056
64	1516	3523	.5239	.0370	1.01	.5	1.05	2.7	.37	.39	69.1	67.3	.0018	646057
65	722	3523	1.7701	.0443	1.17	6.7	1.80	9.9	.06	.32	79.0	80.1	.0020	646058
66	2844	3523	-1.4846	.0455	.86	-5.8	.72	-7.3	.49	.33	83.2	81.3	.0012	646059
67	2159	3523	-.3535	.0376	1.06	4.1	1.09	4.4	.32	.39	67.1	69.1	.0015	646062
68	1159	3523	1.0319	.0387	1.01	.9	1.06	2.2	.35	.37	70.3	71.1	.0019	646063
69	2432	3523	-.7568	.0394	.92	-4.9	.88	-4.8	.46	.38	75.6	72.8	.0014	646064
70	2152	3523	-.3437	.0376	.93	-4.9	.89	-5.3	.47	.39	71.3	69.1	.0015	646065
71	3196	3661	-2.0360	.0523	.87	-3.7	.69	-5.8	.42	.29	87.8	87.4	-.0001	646066
72	3201	3661	-2.0497	.0525	.98	-.6	.95	-.8	.31	.29	87.7	87.5	-.0002	646067
73	3271	3661	-2.2558	.0561	.90	-2.7	.71	-4.7	.38	.27	89.6	89.4	-.0001	646069

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
74	2909	3661	-1.3870	.0438	.90	-4.4	.78	-5.8	.45	.34	81.8	80.4	-.0001	646071
75	1476	3661	.6785	.0368	1.09	6.6	1.17	7.7	.30	.40	65.2	68.5	.0003	646072
76	2485	3661	-.6824	.0385	1.06	3.4	1.08	2.9	.33	.38	70.5	72.3	.0001	646073
77	2632	3661	-.9071	.0398	1.04	2.2	1.11	3.4	.32	.37	74.3	74.7	.0000	646074
78	1104	3661	1.2087	.0390	1.06	3.2	1.10	3.5	.32	.38	71.5	73.3	.0003	646075
79	2728	3661	-1.0634	.0409	.96	-1.9	.92	-2.5	.41	.36	77.6	76.6	.0000	646076
80	1277	3661	.9542	.0377	1.05	2.9	1.18	7.1	.32	.39	71.0	70.6	.0003	646077
81	2478	3551	-.7460	.0397	1.18	9.3	1.38	9.9	.19	.38	69.9	73.6	-.0001	646079
82	3305	3551	-2.7367	.0686	.87	-2.6	.51	-6.6	.39	.23	93.0	93.1	.0000	646080
83	2218	3551	-.3561	.0379	1.15	9.4	1.25	9.9	.24	.40	64.9	69.8	-.0001	646082
84	2965	3551	-1.6569	.0482	.95	-1.8	.92	-1.6	.37	.32	84.7	83.9	-.0001	646084
85	3321	3551	-2.8142	.0706	.94	-1.1	.77	-2.7	.30	.23	93.5	93.5	-.0001	646085
86	3368	3551	-3.0729	.0782	.88	-1.9	.54	-5.2	.34	.21	94.8	94.8	-.0001	646086
87	2579	3551	-.9097	.0408	.91	-4.7	.84	-5.3	.47	.37	77.6	75.5	-.0002	646087
88	1262	3551	.9669	.0382	1.02	1.1	1.11	4.5	.36	.39	72.0	70.4	-.0002	646089
89	2651	3551	-1.0323	.0417	.88	-5.7	.79	-6.7	.48	.37	78.9	76.9	-.0001	646090
90	2408	3551	-.6371	.0391	.88	-7.1	.84	-6.5	.50	.39	75.9	72.5	-.0001	646092
91	4488	6509	-.8948	.0293	.98	-1.3	.93	-3.5	.42	.40	73.2	73.4	-.0002	646094
92	4114	6509	-.5850	.0283	.86	-9.9	.79	-9.9	.55	.41	75.8	70.9	-.0001	646095
93	2726	6509	.4729	.0277	1.33	9.9	1.47	9.9	.10	.41	55.4	68.7	.0001	646096
94	4096	6509	-.5706	.0283	.94	-5.1	.94	-3.8	.46	.41	74.3	70.8	-.0001	646097
95	4681	6509	-1.0653	.0301	.98	-1.4	.96	-1.9	.41	.39	75.7	75.1	-.0002	646099
96	4725	6509	-1.1054	.0303	.91	-6.0	.85	-6.7	.47	.39	77.5	75.5	-.0002	646100
97	2813	6509	.4065	.0276	1.02	1.6	1.04	2.9	.40	.42	68.4	68.5	.0001	646101
98	1570	6509	1.4482	.0313	1.24	9.9	1.67	9.9	.09	.36	74.0	77.4	.0002	646102
99	4760	6509	-1.1377	.0305	.86	-9.9	.77	-9.9	.52	.39	79.1	75.8	-.0002	646103
100	3262	6509	.0684	.0274	1.08	7.8	1.12	8.0	.34	.42	64.5	68.1	.0000	646104

Grade 11 Reading

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
1	14754	20844	-1.4111A	.0179	1.22	9.9	1.40	9.9	.35	.39	73.4	78.4	.3441	564324
2	17479	20844	-2.3926A	.0228	1.16	9.9	.93	-2.3	.46	.31	84.3	88.2	.4150	564329
3	13982	20844	-.9170A	.0165	.90	-9.9	.81	-9.9	.53	.42	76.5	73.9	.0598	564331
4	12162	20844	-.5325A	.0159	1.08	9.9	1.10	8.7	.41	.44	68.3	71.2	.1444	564333
5	17132	20844	-2.3855A	.0227	1.26	9.9	1.05	1.7	.47	.31	82.6	88.1	.5462	564341
6	17320	20861	-1.4643A	.0180	.87	-9.9	.81	-9.9	.34	.39	82.2	79.0	-.4708	564401
7	11721	20861	-.1839A	.0156	1.06	8.7	1.10	9.9	.40	.45	67.8	69.8	-.0943	564402
8	15142	20861	-1.0250A	.0168	.82	-9.9	.73	-9.9	.52	.42	80.4	74.8	-.1604	564403
9	17281	20861	-1.6304A	.0187	.79	-9.9	.67	-9.9	.44	.38	85.7	80.6	-.2812	564415
10	18175	20861	-2.3652A	.0226	.94	-4.1	.79	-7.4	.41	.31	87.6	87.9	.0757	565553
11	8396	20861	.5259A	.0158	1.11	9.9	1.22	9.9	.35	.45	66.8	70.7	.0107	565572
12	12944	20844	-.7665A	.0163	1.20	9.9	1.29	9.9	.32	.43	65.8	72.7	.1822	602805
13	11923	20844	-.3896A	.0158	1.14	9.9	1.17	9.9	.34	.45	64.1	70.5	.0603	602808
14	10393	20844	-.1689A	.0156	1.04	7.1	1.06	6.7	.43	.45	68.2	69.7	.2129	602809
15	12685	20844	-.3700A	.0158	.84	-9.9	.78	-9.9	.56	.45	77.5	70.4	-.1506	602810
16	10635	20844	-.2182A	.0157	1.03	5.1	1.04	4.5	.44	.45	68.8	69.9	.2036	602811
17	10308	20844	-.0748A	.0156	1.07	9.9	1.10	9.9	.40	.45	66.9	69.6	.1394	602814
18	9377	20844	.1252A	.0156	1.07	9.9	1.11	9.9	.39	.45	67.1	69.5	.1660	602818
19	11418	20861	-.1655A	.0156	1.23	9.9	1.33	9.9	.27	.45	60.8	69.7	-.0384	602819
20	12853	20861	-.6086A	.0160	1.00	-.4	.97	-3.0	.45	.44	71.5	71.6	.0479	602820
21	10973	20861	-.4317A	.0158	1.05	7.4	1.05	5.1	.46	.45	68.4	70.7	.3367	602824
22	7298	20861	1.0103A	.0166	1.15	9.9	1.31	9.9	.35	.43	70.0	74.1	-.1860	602825
23	16881	20861	-2.1499A	.0212	1.22	9.9	1.12	4.4	.40	.33	81.6	85.9	.4083	602826
24	14471	20861	-.7592A	.0162	.89	-9.9	.82	-9.9	.48	.43	75.6	72.7	-.2344	602828
25	15586	20861	-1.0778A	.0169	.93	-8.8	.93	-5.1	.40	.42	77.6	75.3	-.2440	602830
26	16315	20844	-1.5300A	.0183	1.03	2.9	1.10	5.0	.34	.38	80.0	79.6	-.0243	602833

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
27	12636	20844	-.4842A	.0159	.97	-4.6	.96	-3.7	.46	.44	72.2	70.9	-.0235	602835
28	15918	20844	-1.5424A	.0183	1.00	.1	.98	-1.1	.43	.38	79.9	79.7	.1221	602839
29	15827	20844	-.4857A	.0159	.88	-9.9	.82	-9.9	.45	.44	75.1	70.9	-.9288	602840
30	11842	20844	-.3427A	.0157	.97	-4.3	.95	-4.8	.47	.45	71.0	70.3	.0333	602842
31	10617	20844	.0661A	.0156	1.08	9.9	1.11	9.9	.39	.45	66.9	69.5	-.0755	602843
32	15193	20844	-1.1774A	.0172	.97	-3.9	.87	-8.4	.44	.41	76.1	76.2	-.0227	602844
33	16860	20844	-1.8466A	.0196	.91	-8.5	.74	-9.9	.49	.36	83.1	82.8	.1042	602845
34	15310	20861	-.9505A	.0166	.83	-9.9	.76	-9.9	.49	.42	80.1	74.1	-.2880	632813
35	14582	20861	-.5892A	.0160	1.08	9.9	1.08	6.9	.31	.44	67.8	71.5	-.4386	632815
36	15123	20861	-1.0038A	.0167	.85	-9.9	.78	-9.9	.50	.42	79.4	74.6	-.1763	632821
37	13730	20861	-.6449A	.0161	1.02	3.1	1.00	.2	.40	.44	70.2	71.9	-.1455	632824
38	18149	20861	-2.1299A	.0211	.82	-9.9	.71	-9.9	.40	.33	87.9	85.7	-.1550	632826
39	16970	20844	-1.6921A	.0189	.94	-6.0	.96	-1.8	.37	.37	82.9	81.3	-.0970	632827
40	18447	20844	-2.5978A	.0243	.95	-2.8	.67	-9.9	.44	.29	88.7	89.9	.1661	632828
41	15616	20844	-1.2115A	.0173	.99	-1.3	1.03	1.9	.37	.41	77.6	76.5	-.1191	632830
42	16136	20844	-1.6056A	.0186	.97	-3.3	.91	-4.6	.45	.38	80.6	80.4	.1143	632833
43	11833	20844	-.4318A	.0158	1.15	9.9	1.23	9.9	.34	.45	65.4	70.7	.1249	632835
44	15741	20844	-1.6606A	.0188	1.02	1.5	.89	-5.5	.50	.37	79.3	80.9	.2994	632837
45	12384	20844	-.5308A	.0159	1.01	.9	.98	-2.2	.46	.44	70.3	71.2	.0871	632838
46	11179	20861	-.0937A	.0156	1.01	2.2	1.05	4.9	.44	.45	69.7	69.6	-.0517	632840
47	4658	20861	1.4945A	.0180	1.06	6.4	1.37	9.9	.29	.41	78.9	78.8	.0970	632842
48	12222	20861	-.7279A	.0162	.96	-6.5	.88	-9.9	.55	.43	72.7	72.4	.3274	632844
49	10467	20861	-.0518A	.0156	1.06	9.9	1.09	9.3	.40	.45	66.9	69.6	.0791	632845
50	12215	20861	-.1683A	.0156	1.01	1.9	1.02	1.9	.43	.45	69.6	69.7	-.2322	632850
51	2869	3803	-1.3234	.0414	.87	-6.5	.75	-6.7	.51	.39	80.8	77.9	.0007	646157
52	2837	3803	-1.2690	.0410	.92	-4.0	.90	-2.5	.46	.40	79.3	77.4	.0007	646158
53	1833	3803	.1627	.0365	1.08	5.5	1.11	5.2	.38	.45	66.4	69.4	.0009	646160
54	2574	3803	-.8549	.0386	1.04	2.6	1.06	2.0	.39	.42	72.4	73.6	.0008	646162
55	2136	3803	-.2409	.0367	1.03	1.9	1.03	1.3	.42	.45	68.9	69.9	.0009	646163
56	2910	3803	-1.3946	.0420	.87	-6.3	.78	-5.7	.50	.39	81.7	78.7	.0007	646164
57	1487	3803	.6301	.0372	1.08	5.3	1.22	8.3	.36	.44	69.9	71.0	.0010	646165
58	2143	3803	-.2503	.0367	1.00	-.1	1.00	-.2	.45	.45	70.2	69.9	.0009	646167
59	2247	3803	-.3913	.0370	1.20	9.9	1.29	9.9	.27	.44	62.8	70.5	.0008	646169
60	2821	3803	-1.2422	.0408	.96	-1.8	.91	-2.3	.43	.40	77.7	77.1	.0007	646170
61	3722	5608	-.9365	.0318	.88	-8.5	.79	-8.8	.54	.45	77.3	73.6	-.0018	646172
62	4212	5608	-1.4674	.0342	.88	-7.6	.78	-6.7	.50	.41	80.8	77.8	-.0019	646173
63	4390	5608	-1.6843	.0356	.84	-9.3	.66	-9.4	.52	.39	82.3	79.8	-.0020	646174
64	3976	5608	-1.2020	.0329	.95	-3.0	.87	-4.3	.47	.43	76.1	75.5	-.0020	646175
65	3527	5608	-.7425	.0313	.94	-4.8	.87	-5.6	.51	.46	74.4	72.5	-.0018	646176
66	3701	5608	-.9153	.0318	.89	-8.3	.86	-5.7	.53	.45	77.7	73.5	-.0019	646179
67	3866	5608	-1.0849	.0324	1.04	2.7	1.06	2.1	.41	.44	73.6	74.6	-.0019	646180
68	3667	5608	-.8811	.0317	1.16	9.9	1.20	7.3	.33	.45	67.4	73.3	-.0019	646181
69	3811	5608	-1.0276	.0322	.99	-.6	.95	-1.8	.45	.44	74.3	74.2	-.0019	646182
70	3859	5608	-1.0776	.0323	.87	-9.0	.76	-9.2	.54	.44	78.1	74.6	-.0019	646183
71	2129	3816	-.2048	.0364	.99	-.7	.98	-1.2	.45	.44	69.7	69.3	.0020	646185
72	3276	3816	-2.0936	.0497	.91	-3.0	.76	-4.4	.41	.33	86.4	86.1	.0017	646187
73	1811	3816	.2118	.0362	1.00	.2	1.02	1.0	.43	.44	68.9	68.9	.0020	646188
74	2909	3816	-1.3473	.0416	.89	-5.4	.75	-7.0	.49	.39	80.0	78.4	.0017	646189
75	1520	3816	.5979	.0368	1.24	9.9	1.38	9.9	.22	.43	61.8	70.2	.0021	646190
76	1898	3816	.0981	.0361	1.40	9.9	1.55	9.9	.09	.44	51.6	68.8	.0020	646191
77	2958	3816	-1.4336	.0423	.87	-6.1	.74	-6.8	.50	.38	82.0	79.3	.0018	646192
78	2209	3816	-.3111	.0366	1.00	-.3	.97	-1.1	.44	.44	68.9	69.7	.0019	646193
79	1770	3816	.2655	.0362	1.03	2.2	1.06	3.0	.41	.44	68.1	69.0	.0020	646194
80	2461	3816	-.6559	.0376	1.02	1.1	1.01	.2	.41	.42	71.0	71.9	.0019	646195
81	2107	3875	-.1618	.0359	1.05	3.6	1.07	3.1	.39	.43	66.7	68.8	.0015	646197
82	3248	3875	-1.9277	.0468	.93	-2.5	1.04	.7	.37	.33	85.0	84.2	.0014	646198
83	1644	3875	.4346	.0362	1.08	5.8	1.16	6.9	.35	.44	67.9	69.5	.0016	646199
84	2646	3875	-.8884	.0381	.96	-2.6	.96	-1.2	.44	.41	75.0	73.4	.0014	646201
85	1808	3875	.2219	.0359	1.19	9.9	1.26	9.9	.27	.44	60.9	68.7	.0016	646203
86	1957	3875	.0308	.0358	1.16	9.9	1.21	9.8	.30	.44	62.6	68.6	.0016	646208

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Reading
87	2773	3875	-1.0771	.0391	1.08	4.3	1.14	3.9	.33	.40	72.6	75.2	.0015	646211
88	2198	3875	-.2795	.0361	1.08	5.6	1.10	4.6	.36	.43	65.8	69.2	.0015	646213
89	2259	3875	-.3591	.0362	1.20	9.9	1.28	9.9	.26	.43	61.8	69.6	.0015	646214
90	2673	3875	-.9278	.0383	1.00	.3	.99	-.3	.40	.41	73.9	73.7	.0015	646215
91	2504	3759	-.8016	.0386	.94	-3.7	.86	-5.0	.49	.43	74.3	73.2	.0009	646217
92	1385	3759	.7493	.0379	1.12	7.2	1.24	8.5	.34	.45	69.1	71.8	.0012	646218
93	2193	3759	-.3579	.0372	.98	-1.2	.94	-2.5	.47	.45	70.9	70.5	.0009	646220
94	2840	3759	-1.3391	.0418	.97	-1.3	.87	-3.2	.43	.40	78.2	78.1	.0007	646221
95	2565	3759	-.8934	.0390	.87	-7.8	.78	-7.5	.53	.42	77.7	73.9	.0008	646222
96	3078	3759	-1.7933	.0460	.87	-5.3	.68	-6.6	.48	.36	83.9	82.6	.0007	646224
97	1476	3759	.6200	.0375	1.10	6.0	1.17	6.7	.37	.45	68.4	71.0	.0011	646225
98	1625	3759	.4132	.0370	1.13	8.5	1.24	9.9	.34	.45	66.0	70.0	.0011	646228
99	2993	3759	-1.6208	.0442	.92	-3.2	.91	-1.9	.43	.37	82.5	80.9	.0007	646229
100	2815	3759	-1.2958	.0415	.90	-5.1	.81	-5.1	.49	.40	79.9	77.6	.0007	646230

Appendix T: Mathematics Item Bank Difficulties

Grade 3 Mathematics

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
1	16186	22213	-1.4245A	.0179	1.06	6.6	1.01	.4	.49	.40	77.4	79.9	.3379	599737
2	16119	22214	-1.0278A	.0168	1.03	3.9	1.09	5.7	.39	.43	75.8	76.3	-.0460	599739
3	11763	22213	-.5456A	.0158	1.24	9.9	1.38	9.9	.40	.46	65.0	72.8	.5751	599741
4	14093	22214	-.3878A	.0157	.99	-.8	.98	-2.1	.45	.47	72.2	71.9	-.1488	599760
5	18222	22213	-1.6064A	.0186	.99	-1.1	1.05	2.1	.33	.39	82.3	81.6	-.1442	599775
6	18382	22214	-1.1303A	.0170	.83	-9.9	.73	-9.9	.38	.42	81.7	77.2	-.7044	599776
7	15648	22213	-1.0640A	.0168	1.02	2.1	1.00	-.1	.45	.43	76.1	76.6	.1244	599778
8	17780	22214	-1.3481A	.0177	.86	-9.9	.77	-9.9	.43	.41	82.7	79.1	-.2485	599780
9	15422	22213	-1.1266A	.0170	1.11	9.9	1.19	9.9	.42	.42	74.8	77.1	.2502	599786
10	14023	22214	-.4287A	.0157	1.01	1.8	1.00	-.2	.44	.46	71.4	72.2	-.0899	599790
11	18790	22213	-2.0164A	.0205	1.12	9.6	1.57	9.9	.25	.35	85.1	85.5	.0525	599793
12	20318	22214	-2.8643A	.0266	1.06	2.9	1.14	3.3	.30	.27	91.5	92.3	.1325	599798
13	13104	22213	-.3665A	.0156	1.08	9.9	1.10	8.3	.42	.47	68.4	71.8	.0746	599802
14	16064	22214	-1.0264A	.0168	1.02	2.7	1.05	3.1	.40	.43	75.7	76.3	-.0315	599805
15	12132	22213	-.1263A	.0154	1.05	7.2	1.05	4.7	.45	.47	68.7	70.9	.0670	599811
16	20389	22214	-2.4542A	.0232	.80	-9.9	.87	-3.7	.28	.31	91.9	89.3	-.3442	599812
17	16000	22213	-.9872A	.0167	1.09	9.9	1.17	9.9	.35	.43	73.4	76.0	-.0534	599813
18	13937	22214	-.4955A	.0158	1.00	.4	.98	-1.8	.46	.46	71.8	72.5	-.0009	599838
19	16726	22213	-.9545A	.0166	1.10	9.9	1.19	9.9	.29	.44	73.1	75.7	-.3043	599839
20	16916	22214	-1.2344A	.0173	.93	-8.6	.86	-8.4	.45	.42	79.6	78.1	-.0759	599841
21	17986	22213	-1.8593A	.0197	.93	-6.1	.72	-9.9	.51	.36	83.4	84.0	.2040	599851
22	15775	22214	-.9945A	.0167	.89	-9.9	.79	-9.9	.52	.43	78.6	76.0	.0185	599855
23	14965	22213	-1.2786A	.0174	1.21	9.9	1.28	9.9	.46	.41	73.2	78.5	.5252	599883
24	15003	22214	-.8016A	.0163	.93	-9.3	.89	-8.1	.50	.44	76.7	74.5	.0336	599888
25	18529	22213	-1.8415A	.0196	.94	-5.8	.89	-4.3	.40	.36	84.8	83.8	-.0208	599894
26	17558	22214	-1.5437A	.0183	1.04	4.1	1.08	3.6	.37	.39	80.4	81.0	.0312	599896
27	16092	22213	-.8187A	.0163	.80	-9.9	.71	-9.9	.53	.44	81.2	74.6	-.2523	599901
28	16669	22214	-1.4152A	.0179	1.03	3.3	.96	-2.1	.45	.40	78.5	79.8	.1857	599902
29	15867	22213	-.7272A	.0161	.84	-9.9	.79	-9.9	.51	.45	80.0	74.0	-.2805	599907
30	16543	22214	-1.0364A	.0168	1.02	2.5	1.03	1.8	.37	.43	75.7	76.4	-.1635	600451
31	18346	22213	-1.9893A	.0203	1.24	9.9	1.58	9.9	.26	.35	82.5	85.2	.2031	600453
32	14730	22214	-.7879A	.0162	1.12	9.9	1.23	9.9	.37	.45	71.0	74.4	.0916	600460
33	17487	22213	-1.3587A	.0177	.94	-6.5	.82	-9.8	.41	.41	79.9	79.2	-.1355	600462
34	17367	22214	-1.4006A	.0178	1.07	7.5	1.05	2.3	.34	.40	77.9	79.6	-.0515	600470
35	15622	22213	-.5876A	.0159	1.00	-.5	.97	-2.6	.40	.46	72.7	73.1	-.3531	600478
36	10927	22214	.1374A	.0154	.94	-9.0	.93	-7.3	.52	.48	72.6	70.5	.0882	603147
37	12218	22213	-.1427A	.0155	1.17	9.9	1.25	9.9	.36	.47	64.6	71.0	.0630	603149
38	15542	22214	-.8950A	.0165	1.02	2.3	1.02	1.2	.42	.44	74.7	75.2	-.0178	633863
39	13466	22213	-.4873A	.0158	1.17	9.9	1.29	9.9	.35	.46	66.9	72.5	.1076	633864
40	9040	22214	.4581A	.0155	1.13	9.9	1.22	9.9	.37	.48	66.5	70.9	.2177	633867
41	17518	22213	-1.5960A	.0186	.95	-5.1	.84	-7.7	.47	.39	81.8	81.5	.0980	633868
42	15988	22214	-.9677A	.0166	.94	-8.3	.86	-9.6	.47	.43	77.2	75.8	-.0695	633869
43	14759	22213	-.5833A	.0159	.94	-8.7	.92	-6.8	.48	.46	75.3	73.0	-.1234	633870
44	16397	22214	-1.1745A	.0171	.85	-9.9	.71	-9.9	.54	.42	80.6	77.6	.0219	633875
45	18462	22213	-1.6036A	.0186	.80	-9.9	.63	-9.9	.45	.39	84.9	81.6	-.2413	633877
46	14103	22214	-.4491A	.0157	.96	-5.7	.93	-5.8	.48	.46	73.4	72.3	-.0896	633891
47	17962	22213	-1.7758A	.0193	1.03	2.5	.99	-.5	.41	.37	82.4	83.2	.1273	633893
48	18269	22214	-1.6943A	.0190	.94	-5.3	.90	-4.2	.39	.38	83.6	82.4	-.0707	633897
49	16295	22213	-1.0937A	.0169	.88	-9.9	.82	-9.9	.50	.43	80.3	76.9	-.0305	633898
50	11508	22214	.0003A	.0154	.83	-9.9	.77	-9.9	.60	.48	78.1	70.7	.0882	633899
51	2736	2982	-2.7217	.0703	.94	-1.2	.89	-1.0	.32	.27	91.9	91.7	.0011	646507
52	2093	2881	-1.0209	.0467	.92	-3.5	.85	-3.5	.48	.42	78.4	76.5	.0006	646508
53	2693	2937	-2.6868	.0708	.86	-2.8	.59	-4.3	.39	.28	91.8	91.7	.0011	646509
54	2743	2990	-2.7021	.0702	.86	-2.8	.60	-4.3	.38	.27	91.9	91.7	.0011	646510
55	2436	2954	-1.7311	.0528	.92	-2.6	.81	-3.1	.43	.36	84.0	83.3	.0008	646511
56	2543	2980	-1.9917	.0561	.94	-1.7	.91	-1.2	.39	.34	85.9	85.6	.0009	646512
57	2696	2952	-2.7014	.0696	.93	-1.5	1.15	1.4	.33	.29	91.4	91.3	.0011	646513

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
58	6618	10482	-.5863	.0231	1.04	3.9	1.03	1.8	.44	.46	71.5	72.9	.0005	646514
59	2544	2951	-2.0484	.0576	1.01	.2	.88	-1.5	.34	.34	86.4	86.4	.0009	646515
60	1501	2953	.1950	.0420	.93	-4.5	.91	-3.4	.53	.47	73.6	70.1	.0005	646516
61	2803	2963	-3.2063	.0849	.93	-1.1	.66	-2.8	.30	.24	94.6	94.6	.0013	646518
62	6409	10354	-.5115	.0231	.98	-1.8	.96	-2.3	.48	.47	73.0	72.5	.0005	646519
63	2105	2947	-.9134	.0456	.84	-7.7	.75	-6.7	.54	.43	80.4	75.9	.0006	646522
64	2439	2861	-1.9666	.0571	.87	-3.7	.62	-5.8	.45	.34	86.2	85.6	.0008	646523
65	2410	3018	-1.5078	.0500	.99	-.4	.93	-1.2	.40	.39	81.0	81.3	.0007	646524
66	9777	10424	-3.1863	.0424	.95	-1.6	.75	-3.9	.29	.24	93.8	93.8	.0011	646525
67	2665	2973	-2.4489	.0640	.96	-.9	1.00	.0	.32	.29	89.7	89.6	.0010	646526
68	2617	2967	-2.2787	.0612	1.06	1.5	1.56	5.5	.25	.32	88.4	88.2	.0009	646527
69	2675	2851	-3.0255	.0812	.95	-.8	.95	-.4	.27	.24	93.8	93.8	.0013	646528
70	2450	2875	-1.9122	.0569	1.18	4.9	1.60	6.9	.18	.34	84.3	85.5	.0008	646529
71	1868	2999	-.4508	.0427	1.16	8.4	1.22	6.5	.34	.46	66.6	72.1	.0006	646530
72	6869	10438	-.7443	.0235	1.10	8.9	1.11	5.3	.39	.46	70.0	73.8	.0006	646531
73	2422	2873	-1.8646	.0557	.99	-.2	.95	-.7	.36	.35	84.3	84.8	.0008	646532
74	9455	10403	-2.7322	.0362	.97	-1.3	.82	-3.4	.32	.29	90.8	90.8	.0007	646533
75	2739	2929	-3.0231	.0785	1.03	.5	1.03	.3	.22	.24	93.5	93.5	.0013	646534
76	9722	10500	-2.9769	.0392	.99	-.2	.94	-1.0	.27	.26	92.6	92.5	.0010	646536
77	2278	2884	-1.4536	.0505	1.01	.4	1.09	1.5	.38	.39	81.6	80.7	.0007	646537
78	1687	3000	-.0656	.0420	1.14	7.7	1.18	6.2	.37	.47	64.5	70.7	.0005	646538
79	2618	2948	-2.3529	.0625	.95	-1.1	.79	-2.5	.35	.31	88.7	88.8	.0009	646541
80	2429	3031	-1.5210	.0499	1.12	4.1	1.31	4.9	.28	.37	79.6	81.3	.0007	646542
81	2370	2940	-1.5565	.0513	1.05	1.6	1.06	.9	.35	.38	80.9	81.8	.0007	646543
82	1632	2939	-.0817	.0422	1.03	1.8	1.04	1.5	.44	.47	68.7	70.4	.0006	646545
83	1536	2987	.1829	.0416	1.08	4.8	1.11	4.3	.41	.47	67.3	70.0	.0005	646546
84	2161	2959	-1.0706	.0464	.89	-5.0	.81	-4.6	.51	.43	80.0	77.0	.0006	646547
85	2405	3011	-1.4701	.0502	.93	-2.6	.84	-2.8	.44	.39	82.2	81.4	.0007	646549
86	1818	2839	-.5069	.0443	1.09	4.5	1.16	4.5	.39	.45	69.2	72.8	.0006	646550
87	2965	2998	-4.9111	.1769	.98	-.1	.69	-1.5	.14	.11	98.9	98.9	.0025	646551
88	2387	2967	-1.5737	.0508	.97	-1.1	.92	-1.3	.40	.38	82.2	81.7	.0007	646552
89	2007	2940	-.7685	.0444	1.04	2.2	1.07	1.9	.40	.43	72.9	74.1	.0006	646553
90	2613	2970	-2.2645	.0607	.95	-1.2	.81	-2.3	.36	.32	88.5	88.0	.0009	646554
91	2185	2846	-1.2910	.0494	1.00	-.1	.99	-.2	.41	.41	79.1	79.2	.0007	646555
92	8175	10405	-1.5319	.0265	.99	-.5	1.03	1.0	.40	.40	80.6	80.4	.0005	646556
93	2370	2942	-1.5689	.0513	.91	-3.4	.74	-4.7	.46	.38	82.8	81.8	.0007	646557
94	7711	10374	-1.2492	.0252	.84	-9.9	.73	-9.9	.53	.42	82.2	77.7	.0006	646558
95	2563	2941	-2.1415	.0596	.95	-1.2	1.10	1.2	.35	.33	88.1	87.3	.0008	646559
96	2639	2943	-2.4262	.0646	.95	-1.0	.87	-1.4	.33	.30	89.9	89.6	.0010	646560
97	2706	2957	-2.6922	.0698	.94	-1.3	.81	-1.9	.33	.28	91.5	91.5	.0011	646561
98	9463	10386	-2.7627	.0366	.94	-2.4	.93	-1.3	.32	.28	91.2	91.1	.0010	646562
99	7171	10462	-.8939	.0239	.95	-4.7	.92	-3.8	.48	.45	76.8	74.9	.0006	646565
100	1664	3029	-.0332	.0416	.97	-1.9	.97	-1.3	.49	.47	72.4	70.6	.0005	646566

Grade 4 Mathematics

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
1	17774	22028	-1.5775A	.0184	.89	-9.9	.89	-5.0	.42	.38	84.0	80.9	-.0718	603918
2	14957	22030	-.4594A	.0157	.93	-9.9	.89	-9.8	.46	.46	74.4	71.9	-.3553	603920
3	17039	22028	-1.6093A	.0185	1.08	8.1	1.20	8.3	.39	.37	79.5	81.3	.2112	603924
4	16970	22030	-1.5503A	.0183	.99	-.6	.89	-5.0	.46	.38	79.9	80.7	.1733	603927
5	18463	22028	-1.3457A	.0176	.76	-9.9	.70	-9.9	.40	.40	85.5	78.6	-.5838	603934
6	19804	22030	-1.9667A	.0202	.73	-9.9	.70	-9.9	.30	.34	90.2	84.8	-.5885	603940
7	13446	22028	-.2170A	.0155	1.02	2.9	1.01	.7	.44	.47	70.4	71.0	-.2096	603947
8	11489	22030	.0661A	.0154	1.09	9.9	1.14	9.9	.41	.48	67.1	70.6	-.0194	603954
9	15045	22028	-.8282A	.0163	1.07	9.9	1.09	5.8	.38	.44	71.4	74.2	-.0031	603955

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
10	18416	22030	-1.5419A	.0183	.82	-9.9	.72	-9.9	.39	.38	84.9	80.6	-.3563	603960
11	16877	22030	-1.3827A	.0177	1.06	6.5	1.09	4.4	.36	.39	77.4	79.0	.0309	603962
12	15167	22030	-.7294A	.0161	.94	-8.2	.90	-7.6	.46	.44	75.3	73.5	-.1371	603963
13	12872	22028	-.5563A	.0158	1.19	9.9	1.25	9.9	.37	.45	65.2	72.4	.2742	603966
14	16870	22030	-1.3742A	.0177	1.03	3.8	1.03	1.7	.38	.39	78.1	78.9	.0245	603969
15	11043	22028	.1981A	.0154	1.05	7.6	1.06	6.3	.44	.48	68.8	70.7	-.0453	603974
16	14084	22030	-.6464A	.0160	.99	-1.8	1.00	-.2	.47	.45	73.7	72.9	.0642	603982
17	13532	22028	-.2169A	.0155	1.00	-.6	.96	-3.9	.45	.47	70.7	71.0	-.2312	604003
18	15709	22030	-.9684A	.0166	.94	-7.9	.87	-8.9	.46	.43	76.5	75.3	-.0436	604015
19	16366	22028	-1.1857A	.0171	1.03	4.2	.97	-1.8	.39	.41	75.5	77.1	-.0133	604020
20	11253	22030	-.0545A	.0154	.98	-2.9	.98	-2.2	.49	.47	71.9	70.7	.1575	604045
21	15565	22028	-.8662A	.0163	1.00	.3	1.01	.8	.41	.43	74.6	74.5	-.1079	604055
22	18152	22030	-1.6299A	.0186	.82	-9.9	.63	-9.9	.45	.37	84.1	81.5	-.1585	604057
23	20132	22028	-1.6015A	.0185	.62	-9.9	.51	-9.9	.32	.37	90.7	81.2	-1.2041	604063
24	17647	22030	-1.6624A	.0187	1.09	8.4	1.19	7.7	.33	.37	80.5	81.8	.0615	604070
25	12289	22030	-.3228A	.0156	1.10	9.9	1.18	9.9	.41	.46	68.1	71.3	.1798	604077
26	20983	22030	-2.6603A	.0248	.55	-9.9	.38	-9.9	.27	.27	95.3	90.9	-.7950	604081
27	18540	22028	-2.2322A	.0217	1.17	9.9	1.34	9.6	.35	.31	84.6	87.4	.3076	604083
28	16096	22030	-1.5269A	.0182	1.21	9.9	1.38	9.9	.40	.38	75.8	80.4	.4140	604091
29	15344	22028	-.9819A	.0166	.98	-3.2	1.01	.6	.45	.42	77.0	75.4	.0721	604095
30	12778	22030	-.2281A	.0155	.88	-9.9	.83	-9.9	.55	.47	75.6	71.0	-.0338	604096
31	11738	22028	-.2747A	.0156	.96	-5.6	.95	-4.6	.52	.46	72.4	71.2	.2631	604100
32	16233	22030	-1.2364A	.0172	.95	-5.8	.87	-7.2	.47	.41	78.6	77.6	.0787	604106
33	11426	22028	-.4087A	.0157	1.10	9.9	1.19	9.9	.46	.46	68.6	71.7	.4721	604128
34	12666	22030	-.1464A	.0155	1.05	7.9	1.07	6.6	.43	.47	68.7	70.8	-.0888	604143
35	15852	22028	-.9817A	.0166	.95	-7.0	.90	-6.4	.45	.42	77.0	75.4	-.0711	634166
36	11896	22030	.0474A	.0154	1.17	9.9	1.25	9.9	.35	.48	64.6	70.6	-.0978	634167
37	12419	22028	.0551A	.0154	.99	-1.9	.98	-2.4	.48	.48	70.9	70.6	-.2311	634169
38	15336	22028	-.9634A	.0166	.90	-9.9	.85	-9.9	.51	.43	77.9	75.2	.0554	634173
39	14412	22028	-.9064A	.0164	1.12	9.9	1.06	4.0	.42	.43	69.5	74.8	.2434	634177
40	16640	22030	-1.6525A	.0187	1.28	9.9	1.30	9.9	.35	.37	75.5	81.7	.3799	634178
41	16423	22028	-1.3048A	.0175	.89	-9.9	.76	-9.9	.51	.40	80.3	78.3	.0918	634186
42	13319	22030	-.3502A	.0156	.84	-9.9	.79	-9.9	.57	.46	77.4	71.4	-.0436	634187
43	15263	22028	-1.0895A	.0168	1.09	9.9	1.11	6.3	.42	.42	73.4	76.3	.2039	634189
44	15048	22030	-.8353A	.0163	.98	-2.1	.99	-.9	.45	.43	74.9	74.2	.0034	634192
45	10032	22028	.5413A	.0156	1.04	6.4	1.07	7.0	.46	.48	70.3	71.5	-.1457	634194
46	14318	22030	-.7544A	.0161	.93	-9.9	.87	-9.5	.52	.44	75.9	73.6	.1138	634196
47	14217	22028	-.8020A	.0162	.98	-2.3	1.00	.2	.49	.44	74.8	74.0	.1878	634197
48	11812	22030	-.0548A	.0154	1.13	9.9	1.21	9.9	.38	.47	65.5	70.7	.0246	634200
49	17945	22028	-1.7895A	.0193	.93	-6.7	.78	-9.5	.45	.36	83.3	83.1	.0846	634201
50	16398	22030	-1.0837A	.0168	.88	-9.9	.78	-9.9	.47	.42	79.5	76.2	-.1277	634202
51	16788	22028	-1.1688A	.0171	.91	-9.9	.87	-7.6	.43	.41	79.2	77.0	-.1616	634206
52	17986	22030	-1.9028A	.0198	1.08	6.7	1.12	4.2	.37	.35	82.5	84.2	.1860	634209
53	17625	22028	-1.3991A	.0178	1.00	-.1	1.06	2.8	.32	.39	79.8	79.2	-.2039	634211
54	10101	22030	.1033A	.0154	1.04	6.5	1.10	9.9	.45	.48	69.6	70.6	.2737	634217
55	16700	22028	-1.4761A	.0180	1.16	9.9	1.38	9.9	.33	.39	77.3	79.9	.1821	634218
56	2269	3018	-1.1618	.0467	.93	-3.0	.82	-3.7	.46	.40	79.5	77.8	.0000	646567
57	2491	2927	-1.9791	.0559	.93	-2.2	.74	-3.7	.39	.33	85.6	85.3	.0001	646568
58	2537	2935	-2.0478	.0579	1.14	3.8	1.53	5.6	.19	.32	85.9	86.5	.0002	646569
59	2552	2937	-2.1080	.0589	.97	-.8	.93	-.8	.34	.33	87.1	87.0	.0001	646570
60	2546	2941	-2.1198	.0582	.92	-2.2	.80	-2.5	.39	.33	87.3	86.7	.0001	646571
61	2491	2932	-1.9205	.0558	1.01	.2	1.05	.7	.32	.33	85.5	85.2	.0001	646572
62	2783	2974	-2.9834	.0781	.96	-.6	.98	-.1	.26	.24	93.5	93.5	.0003	646573
63	2385	3012	-1.4788	.0493	.96	-1.7	.92	-1.4	.41	.38	81.2	80.4	.0001	646574
64	2148	2965	-1.0093	.0459	.86	-6.7	.74	-6.4	.53	.42	80.2	76.3	.0000	646575
65	1223	2949	.6484	.0429	.84	-9.3	.79	-7.9	.59	.48	78.2	71.8	-.0001	646576
66	2684	2987	-2.4957	.0643	.93	-1.5	.70	-3.4	.35	.29	90.2	89.8	.0002	646577
67	2341	2927	-1.5381	.0507	.97	-.9	1.05	.8	.39	.38	81.3	81.2	.0001	646578
68	2541	2975	-1.9671	.0562	.85	-4.6	.62	-5.6	.45	.34	87.2	85.7	.0001	646580
69	2662	2908	-2.6672	.0701	1.03	.7	1.13	1.2	.23	.27	91.5	91.5	.0003	646581

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
70	2133	2905	-1.1179	.0467	.99	-.4	.93	-1.4	.42	.41	76.0	76.7	.0001	646582
71	2398	2984	-1.5399	.0505	.94	-2.2	.87	-2.2	.42	.37	82.7	81.4	.0001	646583
72	1570	2907	.0211	.0425	.97	-1.9	.94	-2.0	.50	.47	71.7	70.6	.0000	646584
73	2538	2986	-1.9628	.0553	.95	-1.6	.83	-2.3	.38	.34	85.4	85.3	.0001	646585
74	1520	2871	.0528	.0426	.98	-1.3	.97	-1.2	.49	.47	71.4	70.3	.0000	646586
75	2439	2955	-1.7063	.0527	.89	-3.9	.86	-2.2	.43	.36	84.9	83.1	.0001	646588
76	2959	2968	-6.2185	.3349	1.00	.1	2.50	5.1	.04	.05	99.7	99.7	.0015	646589
77	6820	10255	-.7974	.0236	1.09	8.8	1.08	3.7	.38	.44	69.9	73.5	-.0001	646590
78	2700	2960	-2.6109	.0683	.94	-1.2	.72	-3.0	.32	.27	91.2	91.2	.0002	646591
79	2249	2918	-1.2773	.0486	1.00	-.2	.95	-.9	.40	.39	78.9	79.0	.0001	646592
80	2631	2949	-2.3797	.0631	.95	-1.2	.80	-2.2	.34	.29	89.1	89.2	.0002	646593
81	1770	2872	-.3737	.0434	1.09	4.9	1.07	2.1	.39	.45	67.5	71.6	.0000	646594
82	2431	2909	-1.7959	.0543	1.11	3.3	1.29	3.6	.26	.35	83.3	84.0	.0001	646597
83	8010	10326	-1.4922	.0260	1.04	2.7	1.13	4.1	.36	.39	79.0	79.3	.0000	646598
84	2297	2899	-1.4496	.0501	1.04	1.6	1.15	2.5	.34	.37	79.8	80.5	.0001	646599
85	7730	10304	-1.3178	.0253	.97	-2.3	1.03	1.2	.42	.40	79.2	77.6	-.0001	646600
86	1428	2947	.2549	.0420	1.02	1.5	1.06	2.2	.45	.47	69.9	70.3	.0000	646601
87	797	2825	1.4097	.0473	1.09	3.8	1.32	7.0	.37	.46	75.5	76.9	.0000	646602
88	5086	10252	.1037	.0226	1.08	8.6	1.13	8.7	.42	.48	68.0	70.8	-.0001	646603
89	1816	2903	-.4595	.0433	1.01	.4	.98	-.7	.45	.45	71.2	71.9	.0000	646604
90	4689	10327	.3401	.0227	1.24	9.9	1.36	9.9	.31	.48	62.6	71.2	-.0001	646605
91	1731	2966	-.2350	.0422	1.07	3.8	1.08	2.8	.41	.46	68.0	70.9	.0000	646606
92	7100	10316	-.9374	.0239	.84	-9.9	.72	-9.9	.56	.43	79.1	74.5	.0000	646607
93	1842	2901	-.4934	.0437	.95	-2.7	.88	-3.8	.50	.46	72.9	72.7	.0000	646609
94	2292	2902	-1.4558	.0503	1.08	3.0	1.31	4.9	.31	.39	79.6	80.5	.0001	646610
95	8383	10336	-1.7507	.0275	.89	-7.7	.82	-5.4	.45	.37	83.7	81.9	-.0001	646793
96	9826	10291	-3.5427	.0489	.96	-1.0	1.00	.1	.23	.20	95.5	95.5	.0001	646796
97	2148	2902	-1.1124	.0472	1.06	2.6	1.31	5.9	.35	.41	76.7	77.2	.0000	646797
98	1772	3026	-.2282	.0418	1.06	3.5	1.07	2.3	.41	.46	68.1	70.8	.0000	646798
99	1691	2906	-.2536	.0426	1.26	9.9	1.42	9.9	.26	.46	62.2	70.8	.0000	646799
100	8521	10219	-1.9357	.0288	1.06	3.3	1.37	8.5	.29	.35	84.0	83.8	.0000	646800
101	1879	2925	-.5402	.0434	1.17	8.7	1.29	8.0	.31	.44	66.8	72.5	.0000	646801
102	2444	2917	-1.8478	.0544	.94	-2.0	.76	-3.8	.40	.34	84.5	84.2	.0001	646802
103	2574	2973	-2.1052	.0578	.89	-3.0	.62	-5.3	.41	.32	87.0	86.7	.0001	646803
104	2777	2824	-4.4520	.1490	1.00	.0	1.06	.4	.12	.12	98.3	98.3	.0006	646805
105	8011	10277	-1.5152	.0263	1.01	.5	1.11	3.5	.38	.39	80.3	79.6	-.0001	646806

Grade 5 Mathematics

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
1	16913	21685	-1.3461A	.0180	1.00	.3	.96	-1.8	.38	.38	79.5	79.7	.0009	603386
2	16818	21685	-1.5507A	.0188	1.08	7.8	1.13	5.9	.40	.36	79.7	81.8	.2412	603388
3	18604	21687	-1.8777A	.0204	.85	-9.9	.65	-9.9	.42	.34	86.7	85.1	-.0989	603394
4	17708	21685	-1.5883A	.0190	.89	-9.9	.86	-6.7	.43	.36	84.4	82.2	-.0302	603399
5	14946	21687	-.9511A	.0168	1.12	9.9	1.14	8.5	.38	.41	72.1	75.8	.1829	603407
6	18436	21685	-1.6657A	.0193	.79	-9.9	.63	-9.9	.42	.35	86.2	83.0	-.2450	603414
7	14710	21687	-.7709A	.0164	1.11	9.9	1.24	9.9	.35	.42	72.0	74.2	.0634	603415
8	15110	21685	-1.0527A	.0170	1.04	4.2	.98	-1.1	.46	.40	74.6	76.8	.2411	603428
9	16186	21687	-.7795A	.0164	.85	-9.9	.77	-9.9	.46	.42	79.3	74.3	-.3488	603429
10	18492	21685	-1.8611A	.0203	.89	-9.7	.81	-7.9	.39	.34	86.5	84.9	-.0665	603435
11	14564	21687	-.9182A	.0167	1.17	9.9	1.27	9.9	.36	.41	70.4	75.5	.2514	603436
12	17778	21685	-1.7105A	.0195	1.01	.6	1.21	8.2	.36	.35	83.6	83.4	.0693	603440
13	16385	21687	-1.1223A	.0173	.92	-9.3	.84	-9.9	.44	.40	79.2	77.4	-.0586	603446
14	15108	21685	-.4476A	.0158	1.00	.3	.97	-2.3	.38	.44	71.3	71.8	-.3736	603447
15	16107	21687	-.8171A	.0165	.95	-6.2	.96	-2.9	.38	.42	76.4	74.6	-.2859	603452
16	17122	21685	-.7303A	.0163	.94	-8.4	.90	-7.3	.32	.42	76.0	73.9	-.7064	603453

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
17	15474	21687	.0171A	.0154	1.09	9.9	1.11	9.9	.35	.46	66.0	69.9	-.9443	603454
18	12743	21685	-.3648A	.0157	1.06	8.7	1.09	7.9	.42	.44	69.5	71.3	.1507	603459
19	14661	21687	-.8521A	.0165	.90	-9.9	.80	-9.9	.54	.42	77.5	74.9	.1589	603476
20	13361	21685	-.5295A	.0159	1.04	5.7	1.02	1.4	.45	.44	70.3	72.3	.1652	603482
21	15707	21687	-.8674A	.0166	.84	-9.9	.74	-9.9	.51	.42	80.3	75.0	-.1155	603491
22	13121	21685	-.6257A	.0161	1.09	9.9	1.11	8.1	.44	.43	69.6	73.0	.3214	603500
23	16656	21687	-1.2721A	.0177	.99	-.7	.98	-1.0	.40	.39	79.4	78.9	.0092	603520
24	17429	21687	-1.7383A	.0197	1.16	9.9	1.34	9.9	.33	.35	81.2	83.7	.2256	603541
25	17460	21685	-1.1598A	.0174	.97	-3.4	1.10	5.5	.28	.40	79.9	77.8	-.3820	603545
26	19312	21687	-2.0794A	.0215	.80	-9.9	.69	-9.9	.36	.32	89.3	87.0	-.2440	603551
27	12269	21685	.2385A	.0154	.98	-3.1	.97	-3.0	.48	.46	70.6	69.7	-.3388	603573
28	14339	21687	-.4862A	.0159	.91	-9.9	.85	-9.9	.49	.44	74.9	72.0	-.1273	603576
29	17535	21685	-2.1727A	.0221	1.60	9.9	2.56	9.9	.22	.31	81.1	87.8	.6250	603578
30	12539	21687	-.2793A	.0156	.99	-1.6	.98	-1.8	.47	.45	71.0	70.9	.1140	603616
31	13582	21685	-.2466A	.0156	.88	-9.9	.82	-9.9	.52	.45	75.2	70.7	-.1753	603627
32	17692	21687	-1.6424A	.0192	.96	-4.1	.91	-4.0	.40	.36	83.6	82.7	.0319	603666
33	14748	21685	-.6714A	.0162	.99	-2.0	.97	-2.1	.43	.43	73.6	73.4	-.0479	603678
34	15474	21687	-1.1330A	.0173	1.04	5.1	1.06	3.2	.44	.40	76.1	77.5	.2217	603689
35	14763	21685	-.8549A	.0165	.96	-5.4	.92	-5.9	.49	.42	75.7	74.9	.1343	603703
36	9508	21687	.2428A	.0154	1.07	9.9	1.12	9.9	.41	.46	67.0	69.7	.3095	634224
37	15624	21685	-.7197A	.0163	.98	-2.1	1.01	.4	.38	.43	74.5	73.8	-.2426	634227
38	17574	21687	-1.8449A	.0202	1.13	9.9	1.10	3.6	.39	.34	82.1	84.8	.2823	634231
39	13836	21685	-.4864A	.0159	.86	-9.9	.79	-9.9	.55	.44	77.0	72.0	.0025	634233
40	14199	21687	-.4908A	.0159	.92	-9.9	.85	-9.9	.49	.44	73.9	72.1	-.0861	634234
41	9237	21685	.4654A	.0154	1.05	7.4	1.09	9.0	.42	.46	68.5	70.0	.1522	634242
42	14213	21687	-.4983A	.0159	1.19	9.9	1.28	9.9	.27	.44	64.8	72.1	-.0821	634246
43	17277	21687	-1.8024A	.0200	1.14	9.9	1.13	4.9	.41	.34	81.1	84.4	.3437	634249
44	17303	21687	-1.5266A	.0187	1.06	5.9	1.11	4.8	.34	.37	80.7	81.6	.0536	634250
45	14450	21685	-.7098A	.0162	1.13	9.9	1.16	9.9	.35	.43	69.0	73.7	.0703	634254
46	16175	21687	-1.3747A	.0181	1.16	9.9	1.22	9.9	.37	.38	75.9	80.0	.2631	634256
47	14799	21685	-.8797A	.0166	1.09	9.9	1.18	9.9	.39	.42	72.5	75.1	.1499	634260
48	13137	21687	-.4258A	.0158	1.20	9.9	1.32	9.9	.30	.44	64.5	71.7	.1161	634262
49	15086	21685	-.8667A	.0166	1.07	8.3	1.09	6.1	.38	.42	73.2	75.0	.0589	634266
50	12844	21687	-.4284A	.0158	1.15	9.9	1.20	9.9	.37	.44	66.4	71.7	.1902	634267
51	16620	21685	-1.3683A	.0181	.89	-9.9	.72	-9.9	.52	.38	80.7	79.9	.1191	634272
52	15450	21687	-1.1442A	.0173	1.20	9.9	1.52	9.9	.31	.40	73.9	77.7	.2398	634275
53	18771	21685	-1.3779A	.0181	.73	-9.9	.67	-9.9	.36	.38	87.2	80.0	-.7034	634279
54	17097	21687	-1.4366A	.0183	.94	-6.3	.84	-8.4	.44	.37	81.2	80.6	.0324	634284
55	13758	21685	-.5250A	.0159	.92	-9.9	.87	-9.9	.51	.44	74.9	72.3	.0613	634285
56	2373	2878	-1.6393	.0532	.91	-2.9	.72	-4.6	.43	.35	83.6	83.1	.0005	646611
57	7924	9993	-1.5044	.0271	.97	-2.0	.91	-2.9	.40	.38	81.5	80.7	-.0001	646612
58	6741	10055	-.7262	.0238	1.14	9.9	1.12	5.6	.34	.43	67.6	73.5	-.0001	646613
59	1886	2902	-.4938	.0432	1.04	2.4	1.07	2.2	.38	.42	70.2	71.8	.0006	646615
60	6860	10034	-.7940	.0240	.89	-9.9	.79	-9.9	.52	.43	77.6	74.1	-.0001	646616
61	2165	2872	-1.1049	.0476	.86	-6.0	.75	-6.0	.51	.39	79.7	77.9	.0005	646617
62	2089	2918	-.8661	.0455	.77	-9.9	.65	-9.9	.59	.41	82.6	75.5	.0006	646618
63	6532	10032	-.6058	.0236	1.00	.1	.94	-3.5	.45	.44	71.5	72.8	.0000	646620
64	6392	10085	-.5154	.0233	.97	-3.1	.93	-4.3	.47	.45	72.7	72.2	.0000	646621
65	8190	10047	-1.6690	.0280	.91	-5.7	.78	-7.0	.43	.36	83.7	82.3	-.0001	646622
66	946	3034	1.2656	.0439	1.14	6.5	1.44	9.9	.31	.44	72.9	74.5	.0010	646623
67	1390	2977	.4623	.0415	1.05	3.0	1.11	4.1	.41	.46	68.1	69.7	.0009	646624
68	8153	10040	-1.6470	.0278	.94	-3.8	.88	-3.6	.41	.36	83.3	82.0	-.0001	646625
69	2123	2884	-1.0227	.0467	1.12	5.2	1.17	3.8	.31	.40	74.0	76.8	.0005	646626
70	1306	2944	.5819	.0417	.92	-5.1	.91	-3.6	.51	.45	73.0	69.7	.0009	646627
71	2219	2806	-1.3473	.0508	.82	-6.9	.69	-6.3	.52	.38	83.6	80.7	.0005	646628
72	1967	2909	-.6653	.0442	.88	-6.6	.88	-3.6	.52	.42	78.1	73.5	.0006	646629
73	1714	2952	-.1600	.0419	1.12	7.2	1.16	5.5	.35	.44	64.6	70.1	.0007	646630
74	1560	2882	.0442	.0421	1.07	4.1	1.08	3.1	.40	.45	66.3	69.7	.0007	646631
75	2225	2858	-1.3032	.0492	.95	-1.9	.99	-.1	.41	.38	81.2	79.5	.0005	646632
76	2560	2897	-2.2028	.0616	1.07	1.6	1.30	3.4	.22	.30	88.3	88.4	.0005	646633

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
77	831	2902	1.4031	.0456	1.33	9.9	1.78	9.9	.12	.42	68.6	75.7	.0011	646634
78	2096	2877	-.9499	.0462	.96	-1.9	.98	-.5	.43	.40	77.9	76.3	.0006	646635
79	8017	10027	-1.5489	.0273	.96	-3.0	.86	-4.6	.42	.37	81.4	81.2	-.0002	646636
80	2229	2951	-1.1481	.0471	1.06	2.5	1.03	.6	.35	.39	76.0	77.9	.0005	646638
81	2427	2852	-1.8486	.0566	1.03	.9	1.08	1.1	.30	.33	85.3	85.4	.0005	646640
82	2412	2909	-1.6412	.0533	1.02	.6	.93	-1.2	.34	.35	83.4	83.5	.0005	646641
83	1438	2860	.2543	.0421	1.18	9.9	1.28	9.9	.31	.45	62.4	69.3	.0008	646643
84	1284	2834	.5412	.0426	.96	-2.2	.97	-1.1	.48	.46	71.3	69.8	.0009	646645
85	1570	2923	.1162	.0417	.98	-1.4	.96	-1.8	.47	.45	70.8	69.4	.0008	646646
86	2252	2918	-1.2180	.0484	.94	-2.4	.85	-3.1	.43	.38	80.9	79.1	.0005	646647
87	2165	2887	-1.0816	.0473	.94	-2.5	.89	-2.5	.44	.39	79.0	77.5	.0005	646648
88	2230	2843	-1.3482	.0499	.92	-3.0	.84	-3.2	.44	.38	81.6	80.0	.0005	646649
89	2479	2969	-1.7360	.0535	.90	-3.4	.75	-4.3	.43	.34	84.9	84.0	.0005	646650
90	2208	2968	-1.0125	.0463	1.18	7.5	1.29	6.0	.25	.39	72.8	77.1	.0005	646651
91	2737	2848	-3.4772	.0997	.90	-1.2	.57	-3.4	.29	.19	96.1	96.1	.0011	646652
92	2980	10022	1.2967	.0247	1.16	9.9	1.46	9.9	.31	.46	73.0	76.0	.0003	646653
93	2569	2999	-1.9034	.0562	.90	-2.8	.79	-3.1	.41	.33	86.6	86.0	.0005	646654
94	1272	2844	.5449	.0425	1.04	2.5	1.13	4.9	.41	.46	69.4	69.9	.0009	646655
95	2060	2894	-.8598	.0452	.90	-4.7	.85	-4.0	.48	.40	77.9	75.0	.0006	646656
96	1215	2948	.7136	.0421	.99	-.4	1.09	3.4	.44	.45	72.3	70.5	.0010	646657
97	1917	3048	-.3876	.0419	1.04	2.4	1.07	2.3	.40	.43	69.7	71.3	.0006	646658
98	2647	2954	-2.3215	.0638	.97	-.8	1.19	2.1	.29	.28	89.9	89.6	.0006	646661
99	2698	2883	-2.9402	.0791	.97	-.4	1.16	1.3	.23	.23	93.6	93.6	.0008	646662
100	2580	2911	-2.1701	.0622	.97	-.8	.84	-2.0	.34	.30	88.8	88.7	.0006	646664
101	8383	10062	-1.8178	.0290	.98	-1.2	.99	-.4	.36	.35	84.4	83.8	-.0001	646665
102	1686	2957	-.0943	.0417	1.03	2.0	1.04	1.7	.42	.44	69.4	69.9	.0007	646666
103	1451	2923	.3195	.0418	.85	-9.9	.82	-7.4	.57	.46	77.0	69.6	.0008	646667
104	1252	2922	.6230	.0420	1.30	9.9	1.52	9.9	.19	.45	59.8	70.0	.0009	646668
105	2438	2926	-1.6542	.0536	.99	-.3	1.28	4.0	.33	.34	84.5	83.9	.0006	646669

Grade 6 Mathematics

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
1	14403	21425	-1.5077A	.0186	1.50	9.9	1.73	9.9	.39	.39	69.6	80.5	.7744	603161
2	15564	21425	-.9395A	.0169	.87	-9.9	.79	-9.9	.49	.44	79.5	75.5	-.1322	603174
3	12311	21430	-.3655A	.0160	1.14	9.9	1.21	9.9	.40	.47	67.4	72.2	.1747	603180
4	13550	21425	.6667A	.0161	1.37	9.9	1.56	9.9	.39	.50	59.9	72.5	-1.1725	603183
5	13632	21430	-.7281A	.0165	1.20	9.9	1.36	9.9	.36	.45	68.0	74.0	.1994	603184
6	15580	21425	-1.5199A	.0186	1.31	9.9	1.48	9.9	.37	.39	73.5	80.7	.4551	603191
7	16436	21430	-1.3334A	.0180	.95	-5.3	.88	-6.0	.44	.40	79.9	78.9	-.0031	603192
8	14686	21425	-.5509A	.0162	.90	-9.9	.85	-9.9	.49	.46	76.7	73.0	-.2717	603194
9	16571	21430	-1.4002A	.0182	.91	-9.9	.86	-6.5	.46	.40	81.8	79.5	.0205	603197
10	17014	21425	-1.7431A	.0195	.98	-2.0	.81	-7.6	.48	.37	81.6	82.8	.2178	603204
11	12713	21430	-.5260A	.0162	1.24	9.9	1.38	9.9	.34	.46	64.5	72.9	.2342	603206
12	14260	21425	-.9176A	.0169	1.03	3.3	1.04	2.5	.48	.44	74.3	75.4	.2218	603214
13	18315	21430	-2.1259A	.0215	1.15	9.9	1.44	9.9	.26	.33	85.5	86.5	.0933	603215
14	17315	21430	-1.4369A	.0183	.95	-5.6	.93	-3.1	.36	.39	81.8	79.9	-.2084	603221
15	15335	21425	-1.7709A	.0197	1.31	9.9	1.15	5.4	.53	.36	74.8	83.1	.7760	603228
16	12875	21425	-.4189A	.0161	.94	-8.5	.89	-8.9	.52	.47	73.8	72.4	.0837	603237
17	17784	21430	-.9248A	.0169	.77	-9.9	.65	-9.9	.42	.44	82.4	75.4	-.9396	603240
18	17881	21425	-.7629A	.0166	.79	-9.9	.69	-9.9	.42	.45	81.0	74.3	-1.1556	603241
19	16807	21430	-1.4479A	.0184	.85	-9.9	.70	-9.9	.49	.39	82.8	80.0	-.0117	603247
20	16437	21425	-1.3345A	.0180	.93	-7.9	.85	-7.4	.45	.40	80.7	78.9	-.0033	603248
21	11326	21430	.2367A	.0158	1.01	.8	1.02	2.1	.49	.49	71.4	71.3	-.1821	603264
22	14686	21425	-1.0449A	.0172	.97	-3.9	.97	-1.4	.51	.43	77.7	76.4	.2330	603266
23	14800	21430	-.7286A	.0165	.86	-9.9	.77	-9.9	.52	.45	78.7	74.1	-.1216	603270

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
24	17075	21425	-1.6743A	.0192	.98	-1.6	.82	-7.5	.44	.37	81.5	82.1	.1254	603273
25	16591	21430	-1.4217A	.0183	1.01	1.1	.99	-.4	.40	.40	79.2	79.7	.0357	603276
26	12407	21425	-.2140A	.0159	.97	-4.7	.98	-2.0	.50	.48	72.8	71.6	-.0031	603283
27	14593	21430	-1.1955A	.0176	1.19	9.9	1.40	9.9	.41	.42	73.0	77.7	.4120	603285
28	18301	21425	-2.1438A	.0216	1.03	2.5	.88	-3.8	.37	.33	85.5	86.6	.1166	603290
29	10782	21430	.0420A	.0158	1.11	9.9	1.15	9.9	.42	.49	67.2	71.2	.1486	603297
30	18307	21425	-2.1903A	.0219	.97	-2.4	.77	-7.6	.43	.32	86.0	87.1	.1616	603299
31	14900	21430	-1.1440A	.0174	1.14	9.9	1.26	9.9	.40	.42	73.8	77.2	.2738	603306
32	14247	21425	-.8654A	.0168	1.09	9.9	1.14	8.1	.42	.44	72.1	75.0	.1723	603309
33	16863	21430	-1.5133A	.0186	1.10	9.8	1.46	9.9	.31	.39	79.8	80.6	.0363	603312
34	17811	21425	-1.7927A	.0198	1.13	9.9	1.36	9.9	.25	.36	81.8	83.3	-.0355	603314
35	14083	21430	-.5975A	.0163	.90	-9.9	.89	-8.0	.51	.46	77.7	73.3	-.0548	603320
36	17475	21425	-1.0906A	.0173	.87	-9.9	.78	-9.9	.37	.42	80.3	76.8	-.6370	603335
37	9636	21430	.3100A	.0158	.96	-5.6	.97	-2.6	.52	.49	73.4	71.4	.1674	603346
38	12957	21425	-.2954A	.0160	1.05	7.8	1.06	4.7	.43	.47	69.6	71.9	-.0625	603349
39	12576	21430	-.2290A	.0159	1.14	9.9	1.22	9.9	.38	.48	66.4	71.7	-.0307	603366
40	16061	21425	-1.6271A	.0190	1.22	9.9	1.24	9.0	.41	.38	76.4	81.7	.4165	603367
41	17338	21425	-2.0894A	.0213	1.15	9.9	.95	-1.5	.46	.33	82.1	86.1	.4518	603369
42	18607	21425	-2.0732A	.0212	.93	-5.9	1.04	1.4	.33	.33	87.3	86.0	-.1016	603376
43	18097	21430	-1.8011A	.0198	.82	-9.9	.67	-9.9	.43	.36	86.5	83.4	-.1470	603382
44	16637	21430	-1.5641A	.0188	1.10	9.9	1.11	4.5	.38	.38	78.4	81.1	.1664	603712
45	15284	21425	-1.0197A	.0171	.99	-1.0	.95	-2.7	.45	.43	75.8	76.2	.0346	603715
46	16640	21430	-1.3599A	.0181	.85	-9.9	.71	-9.9	.49	.40	82.2	79.2	-.0447	634358
47	13826	21425	-.1396A	.0159	.94	-9.1	.90	-8.8	.49	.48	73.7	71.5	-.4505	634359
48	15133	21430	-.9023A	.0168	.94	-7.6	.86	-9.1	.47	.44	76.4	75.3	-.0402	634365
49	12323	21425	-.1728A	.0159	1.02	2.3	1.01	.5	.47	.48	71.3	71.5	-.0232	634376
50	17236	21430	-1.3867A	.0181	.89	-9.9	.81	-9.5	.41	.40	82.0	79.4	-.2311	634395
51	14195	21430	-.6800A	.0164	1.01	1.5	.99	-.4	.45	.45	73.2	73.7	-.0015	634401
52	15961	21430	-1.1354A	.0174	.96	-4.2	.95	-2.8	.43	.42	78.3	77.1	-.0530	634405
53	12512	21425	-.4368A	.0161	1.23	9.9	1.31	9.9	.35	.47	63.8	72.5	.1950	634408
54	13854	21430	-.4326A	.0161	1.00	.7	.97	-2.6	.45	.47	71.9	72.4	-.1604	634409
55	14387	21425	-1.0315A	.0171	1.05	6.1	1.13	7.0	.47	.43	75.2	76.3	.3024	634416
56	15475	21430	-.9052A	.0168	.98	-3.0	1.04	2.4	.41	.44	76.4	75.3	-.1393	634426
57	18681	21425	-2.1864A	.0219	1.08	5.9	1.79	9.9	.22	.32	87.2	87.0	-.0206	634430
58	11308	21430	.1564A	.0158	1.00	-.6	1.01	1.2	.49	.49	71.7	71.2	-.0974	634433
59	2430	2673	-2.6160	.0713	.86	-2.9	.55	-4.6	.39	.28	91.1	90.9	.0003	646670
60	2216	2802	-1.5014	.0515	.90	-3.7	.80	-3.3	.46	.39	83.2	80.7	.0000	646672
61	2397	2652	-2.5817	.0698	1.01	.2	1.45	3.6	.25	.28	90.4	90.3	.0003	646673
62	1967	2784	-.9546	.0471	.87	-6.3	.81	-4.3	.52	.44	80.3	75.6	.0000	646674
63	2286	2723	-1.8378	.0570	1.03	.8	1.09	1.1	.34	.36	84.2	84.4	.0001	646675
64	5440	10278	.0224	.0228	1.08	8.7	1.09	5.9	.43	.49	68.3	71.3	.0007	646676
65	1703	2650	-.5505	.0463	.94	-3.2	.87	-3.5	.51	.46	75.7	73.2	.0001	646677
66	8574	10157	-1.9699	.0297	.99	-.4	1.04	1.0	.35	.35	85.0	84.6	.0005	646678
67	2154	2719	-1.4724	.0525	1.09	3.1	1.19	2.7	.33	.40	79.1	80.9	.0001	646679
68	2010	2884	-.8589	.0458	.90	-5.2	.82	-4.2	.51	.44	77.6	75.1	.0001	646680
69	2397	2747	-2.1891	.0616	1.10	2.4	1.43	4.1	.24	.32	87.3	87.3	.0002	646681
70	2553	2785	-2.7016	.0722	1.00	.1	1.22	1.8	.25	.26	91.5	91.5	.0003	646682
71	2044	2606	-1.4767	.0528	1.06	2.1	1.30	4.4	.34	.39	80.0	80.1	.0000	646683
72	6200	10104	-.4493	.0234	1.24	9.9	1.35	9.9	.31	.47	63.8	72.4	.0006	646684
73	2239	2890	-1.3801	.0495	.97	-1.0	.97	-.5	.41	.40	80.5	79.5	.0001	646685
74	2460	2797	-2.2698	.0622	.88	-3.2	.66	-4.0	.40	.31	88.2	87.9	.0002	646687
75	2166	2728	-1.4877	.0523	1.07	2.4	1.07	1.1	.35	.39	78.9	80.8	.0001	646688
76	2432	2817	-2.1099	.0592	1.11	2.9	1.73	6.9	.21	.33	86.7	86.5	.0001	646689
77	4288	10179	.5929	.0233	.89	-9.9	.87	-8.8	.57	.50	76.5	72.4	.0008	646693
78	5644	10061	-.1451	.0232	1.10	9.9	1.15	8.8	.41	.48	67.9	71.5	.0007	646694
79	2437	2803	-2.1169	.0604	.92	-2.2	.86	-1.6	.38	.33	87.8	87.0	.0001	646695
80	2407	2685	-2.4502	.0673	1.04	.9	1.32	2.8	.25	.29	89.5	89.6	.0002	646696
81	2282	2756	-1.7526	.0555	.92	-2.6	.75	-3.5	.43	.37	84.4	83.4	.0001	646697
82	1854	2693	-.8181	.0471	.93	-3.3	.86	-3.2	.49	.44	76.4	74.7	.0001	646699
83	971	2759	1.0735	.0460	1.18	8.2	1.46	9.9	.34	.49	70.5	74.5	.0006	646700

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
84	6501	10216	-.5634	.0235	1.02	2.4	1.07	3.4	.44	.46	72.5	73.0	.0007	646701
85	2192	2826	-1.3423	.0501	1.07	2.6	.98	-.3	.37	.40	77.0	79.7	.0001	646702
86	2366	2723	-2.1495	.0613	.87	-3.6	.73	-3.2	.41	.33	87.6	87.0	.0001	646703
87	422	2715	2.5031	.0601	1.18	4.7	3.00	9.9	.21	.44	86.3	86.3	.0008	646704
88	1801	2656	-.7428	.0471	1.15	6.9	1.22	4.8	.34	.45	69.0	74.3	.0001	646706
89	4630	10084	.3968	.0232	1.19	9.9	1.31	9.9	.37	.50	65.8	71.8	.0008	646707
90	2180	2763	-1.4458	.0515	.93	-2.4	.90	-1.7	.43	.39	82.3	80.5	.0001	646709
91	2046	2691	-1.2709	.0503	.93	-2.8	.81	-3.5	.46	.41	79.8	78.5	.0000	646711
92	2508	2823	-2.3398	.0639	.89	-2.6	.81	-1.9	.38	.31	89.4	88.9	.0002	646712
93	1796	2692	-.6684	.0465	.82	-9.4	.76	-6.3	.57	.45	81.3	74.1	.0001	646713
94	1607	2814	-.1696	.0436	.85	-8.7	.79	-7.2	.58	.47	77.3	71.3	.0002	646714
95	2474	2702	-2.6967	.0732	.86	-2.8	.68	-3.0	.38	.27	91.5	91.5	.0003	646716
96	1188	2692	.5371	.0448	1.32	9.9	1.55	9.9	.26	.49	62.3	71.7	.0004	646717
97	6019	10215	-.3065	.0231	1.02	2.1	1.01	.4	.47	.48	70.9	71.9	.0006	646718
98	2021	2674	-1.2088	.0502	.94	-2.4	.82	-3.5	.46	.41	78.1	78.3	.0001	646719
99	1796	2820	-.5248	.0446	1.05	2.6	1.10	2.7	.42	.46	71.2	72.8	.0001	646720
100	2156	2766	-1.4120	.0508	1.00	.2	1.33	4.9	.36	.39	81.4	79.7	.0001	646721
101	2236	2766	-1.6409	.0531	1.04	1.5	1.07	1.0	.34	.37	81.4	81.8	.0001	646722
102	6798	10212	-.7309	.0238	.96	-3.4	.94	-2.8	.48	.45	75.1	73.9	.0006	646723
103	2012	2747	-1.0782	.0484	.96	-1.9	.98	-.4	.45	.42	78.6	77.0	.0001	646724
104	2457	2854	-2.0300	.0585	1.07	1.9	1.46	4.7	.26	.33	86.4	86.3	.0001	646726
105	1846	2697	-.7859	.0468	.86	-6.8	.84	-3.9	.53	.44	79.3	74.5	.0001	646727
106	2194	2807	-1.4433	.0506	1.07	2.7	1.55	7.8	.31	.39	79.8	79.9	.0000	646728
107	6880	10060	-.8403	.0243	1.14	9.9	1.25	9.9	.35	.45	70.9	74.6	.0006	646729
108	2139	2813	-1.2470	.0492	1.15	5.6	1.43	6.8	.29	.41	77.0	78.5	.0001	646730

Grade 7 Mathematics

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
1	14777	20991	-.9569A	.0170	.97	-4.3	.97	-1.6	.45	.43	76.6	75.2	-.0044	599927
2	8943	20994	.5566A	.0161	1.06	9.1	1.13	9.9	.44	.49	70.5	72.2	.0072	599933
3	16220	20991	-1.5034A	.0186	1.06	5.8	1.19	7.7	.37	.38	79.1	80.1	.1007	599936
4	18760	20994	-2.1984A	.0219	.85	-9.9	1.04	1.3	.28	.32	89.5	86.9	-.2833	599943
5	17183	20991	-1.6665A	.0192	.82	-9.9	.62	-9.9	.47	.37	84.6	81.7	-.0846	599953
6	12601	20994	-.6203A	.0164	.95	-6.5	.92	-5.8	.53	.45	74.6	73.0	.2534	599957
7	10659	20991	.2125A	.0159	.91	-9.9	.89	-9.9	.55	.49	75.3	71.2	-.0879	599969
8	13522	20994	-.4797A	.0162	.94	-8.4	.95	-3.9	.48	.46	74.6	72.3	-.1353	599972
9	13167	20991	-.4380A	.0162	.80	-9.9	.70	-9.9	.59	.46	79.7	72.1	-.0817	599980
10	16316	20994	-1.4822A	.0185	.94	-6.1	.87	-6.0	.44	.39	80.9	79.9	.0462	599990
11	8728	20991	.3631A	.0160	1.11	9.9	1.19	9.9	.41	.49	68.1	71.5	.2559	600013
12	12476	20994	-.3014A	.0160	1.10	9.9	1.12	9.8	.40	.47	67.6	71.6	-.0368	600020
13	14624	20991	-1.1353A	.0174	1.11	9.9	1.12	6.2	.41	.42	73.0	76.7	.2228	600027
14	13775	20994	-1.2561A	.0177	1.31	9.9	1.49	9.9	.40	.41	69.7	77.7	.5820	600032
15	16111	20991	-1.3234A	.0180	.82	-9.9	.70	-9.9	.51	.40	82.9	78.4	-.0481	600036
16	12419	20994	-.3569A	.0161	1.13	9.9	1.16	9.9	.39	.47	66.5	71.8	.0343	600043
17	12578	20991	-.4627A	.0162	1.07	9.8	1.08	6.1	.43	.46	69.4	72.2	.0997	600048
18	14216	20994	-.8261A	.0167	.97	-4.2	.92	-5.3	.47	.44	75.0	74.3	.0247	600054
19	16342	20991	-1.2614A	.0178	.89	-9.9	.79	-9.9	.43	.40	80.5	77.8	-.1922	600058
20	12787	20994	-.4341A	.0162	.94	-8.9	.89	-9.2	.51	.46	74.3	72.1	.0159	600061
21	12413	20991	-.6512A	.0164	1.06	8.6	1.13	8.7	.47	.45	71.5	73.1	.3333	600076
22	13666	20994	-.7606A	.0166	1.02	3.1	1.03	2.3	.45	.44	73.1	73.8	.1114	600077
23	12601	20991	-.3205A	.0161	1.17	9.9	1.30	9.9	.34	.47	65.8	71.7	-.0505	600093
24	12926	20994	-.4936A	.0162	1.05	7.4	1.05	3.9	.43	.46	70.3	72.3	.0393	600109
25	11938	20991	-.0873A	.0159	1.10	9.9	1.11	9.6	.41	.48	67.1	71.2	-.1135	600123
26	15552	20994	-1.2139A	.0176	.87	-9.9	.76	-9.9	.50	.41	80.3	77.4	.0228	600481
27	16963	20991	-1.5634A	.0188	.94	-5.8	.94	-2.4	.38	.38	82.4	80.7	-.1059	600493

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
28	10507	20994	.2046A	.0159	1.11	9.9	1.15	9.9	.41	.49	67.2	71.2	-.0413	600880
29	17164	20991	-1.5290A	.0187	.71	-9.9	.51	-9.9	.52	.38	86.5	80.3	-.2208	634514
30	14054	20994	-.7202A	.0165	.85	-9.9	.76	-9.9	.54	.45	78.5	73.6	-.0376	634515
31	14342	20991	-.6432A	.0164	.86	-9.9	.78	-9.9	.51	.45	77.8	73.1	-.1990	634517
32	13216	20994	-.7406A	.0166	.91	-9.9	.87	-9.0	.55	.44	76.8	73.7	.2128	634519
33	14893	20991	-.9274A	.0169	.83	-9.9	.79	-9.9	.53	.43	80.6	75.0	-.0692	634520
34	13527	20994	-.6589A	.0164	.96	-5.1	.91	-6.5	.49	.45	74.2	73.2	.0459	634524
35	18849	20991	-2.2835A	.0225	.86	-9.9	.87	-4.0	.29	.31	89.8	87.7	-.2487	634525
36	16920	20994	-1.5158A	.0186	.94	-6.0	.82	-8.4	.38	.38	80.8	80.2	-.1383	634528
37	14801	20991	-.8224A	.0167	1.01	1.1	1.00	.1	.40	.44	73.9	74.2	-.1496	634529
38	17590	20994	-1.8658A	.0201	.87	-9.9	.71	-9.9	.43	.35	85.1	83.7	-.0447	634532
39	10600	20991	.1402A	.0159	1.11	9.9	1.17	9.9	.41	.49	67.6	71.1	-.0006	634534
40	15863	20994	-1.2198A	.0176	.92	-9.4	1.01	.7	.43	.41	80.7	77.4	-.0717	634535
41	14394	20991	-.7859A	.0166	1.13	9.9	1.27	9.9	.33	.44	70.3	74.0	-.0676	634538
42	18260	20994	-2.3324A	.0228	.99	-.9	.91	-2.5	.38	.30	87.3	88.1	.1291	634543
43	16428	20991	-1.3511A	.0180	.96	-4.5	.96	-1.9	.38	.40	80.1	78.6	-.1294	634544
44	11412	20994	-.1020A	.0159	1.05	7.1	1.07	6.1	.45	.48	69.4	71.2	.0364	634546
45	13784	20991	-.6484A	.0164	1.06	8.7	1.00	.3	.41	.45	69.5	73.1	-.0359	634547
46	11913	20994	-.2524A	.0160	.98	-3.2	.98	-1.5	.49	.47	72.6	71.5	.0597	634548
47	12857	20991	-.6470A	.0164	1.01	1.8	1.01	.7	.48	.45	72.2	73.1	.2131	634552
48	14628	20994	-.8076A	.0167	1.06	7.4	1.11	6.6	.38	.44	72.5	74.1	-.1133	634555
49	10836	20991	.0991A	.0159	.98	-3.0	.97	-3.0	.50	.49	71.8	71.1	-.0192	634557
50	15146	20994	-1.1712A	.0175	.98	-2.8	.91	-4.7	.46	.41	77.1	77.0	.1049	634559
51	17534	20991	-1.6376A	.0191	.74	-9.9	.56	-9.9	.47	.37	86.8	81.4	-.2605	634561
52	16391	20994	-1.1968A	.0176	.85	-9.9	.74	-9.9	.44	.41	81.3	77.2	-.2765	634564
53	18669	20991	-2.3595A	.0230	.80	-9.9	.53	-9.9	.42	.30	89.3	88.4	-.0618	634566
54	13614	20994	-.7064A	.0165	.97	-4.3	.94	-4.0	.48	.45	74.2	73.5	.0704	634568
55	12532	20991	-.9036A	.0169	1.36	9.9	1.68	9.9	.33	.43	64.2	74.8	.5563	634574
56	15925	20994	-1.1038A	.0173	.91	-9.9	.95	-2.8	.41	.42	79.8	76.4	-.2126	634576
57	8633	20991	.7594A	.0164	1.00	.1	1.07	6.0	.50	.49	73.8	73.2	-.1131	634584
58	13055	20994	-.0658A	.0159	1.14	9.9	1.19	9.9	.37	.48	66.0	71.1	-.4286	634586
59	6214	9402	-.7192	.0247	.85	-9.9	.75	-9.9	.55	.45	78.7	73.5	-.0001	646868
60	2177	2949	-1.1653	.0468	.77	-9.9	.61	-8.6	.57	.41	83.7	77.1	.0001	646870
61	1863	2827	-.6713	.0451	.96	-2.3	.98	-.4	.47	.45	75.1	73.5	.0002	646871
62	1063	2856	.8811	.0450	1.01	.6	1.08	2.3	.49	.50	74.0	74.1	.0006	646872
63	1587	2926	-.0693	.0428	.99	-.4	1.01	.2	.49	.48	72.4	71.3	.0003	646873
64	6237	9298	-.7895	.0249	.94	-5.9	.87	-6.0	.49	.44	75.4	73.7	-.0001	646874
65	1561	2910	-.0032	.0426	1.00	.1	1.01	.4	.47	.47	71.1	70.6	.0004	646875
66	819	2920	1.4604	.0477	1.14	5.4	1.53	9.9	.38	.49	76.4	78.2	.0007	646876
67	1854	2882	-.5995	.0442	1.08	4.1	1.11	2.8	.40	.46	69.7	73.1	.0002	646877
68	1283	2924	.5186	.0431	1.17	8.8	1.34	9.9	.36	.49	67.7	71.9	.0006	646878
69	5592	9336	-.3796	.0241	1.05	4.4	1.03	1.8	.44	.47	69.7	71.8	.0000	646879
70	1500	2882	.0986	.0429	1.09	5.0	1.13	4.1	.42	.48	67.6	71.0	.0004	646881
71	2195	2929	-1.2437	.0474	.98	-1.0	1.08	1.5	.41	.40	78.5	77.6	.0001	646883
72	1765	2811	-.5235	.0446	.95	-2.5	.92	-2.1	.50	.47	74.2	72.8	.0002	646884
73	2675	2955	-2.6020	.0665	.87	-3.0	.85	-1.5	.36	.28	90.6	90.5	.0003	646885
74	6010	9442	-.5871	.0243	1.21	9.9	1.35	9.9	.31	.45	65.7	72.6	.0000	646887
75	2597	2942	-2.3189	.0612	.96	-1.0	.89	-1.2	.33	.30	88.5	88.2	.0002	646889
76	1872	2785	-.7386	.0456	.95	-2.7	.98	-.4	.47	.44	76.8	73.9	.0002	646890
77	2412	2929	-1.7814	.0529	1.02	.6	1.01	.1	.35	.36	83.1	82.9	.0001	646891
78	6950	9326	-1.2243	.0265	1.08	6.4	1.32	9.8	.33	.41	76.9	77.4	.0000	646892
79	963	2900	1.0929	.0457	1.12	5.3	1.27	6.7	.41	.50	72.9	75.8	.0007	646893
80	1535	2892	.0208	.0428	1.16	8.8	1.24	8.0	.37	.48	64.6	70.9	.0004	646894
81	1993	2950	-.8138	.0444	1.03	1.3	1.06	1.5	.42	.44	72.7	74.0	.0002	646895
82	933	2887	1.1803	.0461	.97	-1.4	.99	-.2	.51	.50	76.9	76.0	.0007	646896
83	3744	9318	.6910	.0244	1.11	9.7	1.25	9.9	.41	.49	70.5	72.8	.0002	646897
84	2135	2905	-1.0949	.0469	1.27	9.9	1.47	8.0	.22	.41	70.6	76.9	.0002	646898
85	1455	2963	.2126	.0422	1.12	6.6	1.20	7.1	.39	.48	67.4	70.9	.0005	646899
86	1396	2999	.3709	.0421	1.02	.9	1.05	1.8	.47	.49	71.3	71.2	.0005	646900
87	1662	2836	-.3048	.0437	1.15	7.8	1.16	4.7	.38	.47	65.3	71.6	.0003	646902

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
88	2143	2915	-1.1917	.0471	.87	-6.2	.74	-5.4	.51	.42	81.1	77.1	.0001	646903
89	1404	2962	.3145	.0424	1.03	1.7	1.03	1.2	.47	.49	70.3	71.2	.0005	646904
90	1693	2893	-.2753	.0432	.95	-2.5	.95	-1.6	.50	.47	73.7	71.6	.0003	646907
91	1308	2928	.4840	.0432	1.08	4.0	1.17	5.5	.44	.50	71.2	72.1	.0005	646908
92	7835	9406	-1.8757	.0301	.85	-9.4	.70	-7.8	.46	.35	85.1	83.7	-.0001	646909
93	2190	2840	-1.3975	.0495	.91	-3.9	.87	-2.3	.46	.39	81.7	79.1	.0001	646910
94	1909	2901	-.6726	.0443	1.08	3.9	1.22	5.3	.38	.45	72.1	73.3	.0002	646911
95	1222	2905	.6049	.0433	1.11	5.9	1.17	5.5	.41	.49	68.7	72.1	.0006	646912
96	1534	3035	.1313	.0416	1.25	9.9	1.30	9.9	.31	.48	60.4	70.6	.0005	646913
97	3556	9265	.7851	.0247	1.22	9.9	1.40	9.9	.33	.49	66.5	73.4	.0002	646914
98	1851	2893	-.5631	.0441	1.09	4.7	1.13	3.3	.39	.45	69.9	72.8	.0002	646915
99	1488	2913	.0969	.0427	1.23	9.9	1.32	9.9	.33	.48	63.1	71.0	.0004	646916
100	1550	2860	-.0355	.0431	1.23	9.9	1.33	9.9	.32	.48	62.4	71.1	.0004	646917
101	1503	3008	.1555	.0418	1.16	8.7	1.26	8.7	.37	.48	65.9	70.8	.0004	646918
102	5596	9427	-.3506	.0239	1.04	3.6	1.06	3.0	.44	.47	70.2	71.6	.0000	646919
103	754	2835	1.5384	.0492	.93	-2.8	1.14	2.7	.51	.49	82.1	79.1	.0008	646920
104	1015	2979	1.0649	.0446	.99	-.3	1.10	2.9	.48	.49	76.5	74.8	.0007	646921
105	990	2932	1.0578	.0453	.92	-3.8	.96	-1.1	.54	.50	78.2	75.4	.0007	646922
106	1337	2889	.3890	.0432	1.11	6.0	1.22	7.2	.41	.50	68.5	71.7	.0005	646923
107	1447	2907	.1606	.0428	1.15	8.1	1.23	7.6	.38	.49	66.1	71.2	.0004	646924
108	3769	9351	.6686	.0244	1.07	6.8	1.15	8.5	.44	.49	71.3	72.8	.0002	646925

Grade 8 Mathematics

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
1	14018	20792	-.8755A	.0166	1.01	1.4	1.02	1.6	.42	.43	73.1	73.5	-.0017	600140
2	14010	20795	-.7863A	.0164	1.12	9.9	1.23	9.9	.33	.44	69.7	72.9	-.0904	600144
3	10023	20792	.0090A	.0159	.83	-9.9	.79	-9.9	.59	.47	77.8	70.7	.1434	600151
4	14524	20795	-.9435A	.0167	.95	-6.3	.89	-7.5	.44	.43	75.2	73.9	-.0768	600158
5	14464	20792	-1.5726A	.0185	1.17	9.9	1.09	3.8	.50	.37	73.9	79.6	.5789	600167
6	14246	20795	-1.3060A	.0176	1.09	9.9	1.08	4.2	.46	.40	74.1	77.0	.3728	600169
7	12536	20792	-.4431A	.0160	.99	-1.8	1.02	1.8	.46	.46	72.3	71.3	-.0412	600187
8	15881	20795	-1.2855A	.0175	.86	-9.9	.87	-7.3	.45	.40	81.5	76.8	-.1468	600194
9	14502	20792	-1.1436A	.0172	1.01	1.6	.99	-.8	.44	.41	74.7	75.5	.1344	600225
10	13608	20795	-.7235A	.0163	1.12	9.9	1.22	9.9	.34	.44	68.1	72.5	-.0427	600230
11	11709	20792	-.2913A	.0159	1.04	6.2	1.05	4.6	.44	.46	69.0	70.9	.0189	600250
12	12684	20795	-.4568A	.0160	1.03	4.8	1.06	5.1	.42	.46	70.4	71.3	-.0659	600253
13	14896	20792	-.7994A	.0165	.80	-9.9	.70	-9.9	.52	.44	80.1	73.0	-.3369	600260
14	12865	20795	-.6251A	.0162	.89	-9.9	.85	-9.9	.53	.45	76.3	72.0	.0573	600261
15	12584	20792	-.7659A	.0164	1.01	1.9	1.01	.4	.49	.44	72.5	72.8	.2735	600267
16	14679	20792	-1.0484A	.0169	.97	-4.4	.94	-3.4	.44	.42	75.7	74.7	-.0150	600301
17	16371	20795	-1.7318A	.0191	.98	-1.7	.86	-6.0	.44	.36	80.6	81.3	.1459	600303
18	11155	20792	.0298A	.0159	1.13	9.9	1.17	9.9	.38	.48	65.6	70.7	-.1633	600312
19	14196	20795	-.9919A	.0168	.99	-1.8	.99	-.3	.45	.42	75.1	74.3	.0676	600319
20	13511	20792	-.7005A	.0163	.96	-5.9	.92	-5.7	.47	.44	73.7	72.4	-.0399	600332
21	15988	20795	-1.3693A	.0178	.94	-6.7	.89	-5.8	.40	.39	79.4	77.6	-.0960	600337
22	13194	20792	-.6246A	.0162	.89	-9.9	.84	-9.9	.52	.45	75.8	72.0	-.0313	600363
23	12909	20795	-.6530A	.0162	.90	-9.9	.83	-9.9	.53	.44	75.9	72.1	.0740	600371
24	18129	20795	-2.7130A	.0252	1.23	9.9	.99	-.3	.38	.26	87.2	90.8	.4239	600382
25	14264	20792	-1.0093A	.0168	.87	-9.9	.76	-9.9	.53	.42	77.5	74.4	.0656	600510
26	12222	20795	-.6697A	.0163	1.17	9.9	1.21	9.9	.38	.44	65.5	72.2	.2702	600513
27	15098	20792	-1.1237A	.0171	1.03	3.9	1.15	8.1	.36	.41	75.7	75.3	-.0636	600522
28	16176	20795	-1.4685A	.0181	.90	-9.9	.89	-5.3	.43	.38	81.6	78.5	-.0576	603724
29	12377	20792	-.4369A	.0160	.88	-9.9	.83	-9.9	.54	.46	75.7	71.2	-.0060	634588
30	16114	20795	-1.3587A	.0177	.92	-9.8	.83	-9.1	.41	.39	79.2	77.5	-.1502	634592

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
31	11641	20792	-.7195A	.0163	1.22	9.9	1.33	9.9	.38	.44	65.3	72.5	.4682	634597
32	11186	20795	-.2446A	.0159	1.07	9.9	1.08	7.3	.43	.47	67.8	70.8	.1050	634599
33	13933	20792	-1.0063A	.0168	1.05	6.1	1.03	1.6	.43	.42	72.3	74.4	.1558	634603
34	15777	20795	-1.2700A	.0175	.89	-9.9	.79	-9.9	.44	.40	79.3	76.6	-.1282	634604
35	8520	20792	.3090A	.0160	1.13	9.9	1.20	9.9	.37	.48	66.7	71.3	.2275	634608
36	17549	20795	-2.1306A	.0211	1.05	3.9	1.40	9.9	.31	.32	84.9	85.5	.0983	634612
37	11570	20792	-.1446A	.0159	1.23	9.9	1.32	9.9	.30	.47	62.0	70.7	-.0936	634613
38	15478	20795	-1.1909A	.0173	.81	-9.9	.68	-9.9	.52	.41	81.2	75.9	-.1129	634616
39	12840	20792	-.4303A	.0160	1.14	9.9	1.23	9.9	.33	.46	65.9	71.2	-.1344	634620
40	15676	20795	-1.5555A	.0184	1.11	9.9	1.23	9.8	.37	.37	77.6	79.4	.1988	634625
41	17753	20792	-2.0066A	.0204	.80	-9.9	.60	-9.9	.44	.33	86.2	84.2	-.1230	634628
42	12714	20795	-.5640A	.0161	.91	-9.9	.85	-9.9	.52	.45	74.8	71.7	.0351	634630
43	16502	20792	-1.7044A	.0190	.92	-7.7	.79	-9.5	.45	.36	81.7	81.0	.0706	634633
44	10921	20795	-.2173A	.0159	1.13	9.9	1.13	9.9	.39	.47	65.6	70.7	.1445	634637
45	12683	20792	-.4920A	.0161	.91	-9.9	.85	-9.9	.52	.45	75.2	71.4	-.0302	634638
46	12910	20795	-.4195A	.0160	.89	-9.9	.83	-9.9	.52	.46	75.5	71.2	-.1636	634643
47	13606	20792	-.8148A	.0165	1.11	9.9	1.18	9.9	.36	.43	69.4	73.1	.0508	634644
48	12684	20795	.0438A	.0159	1.12	9.9	1.15	9.9	.39	.48	66.7	70.7	-.5715	634648
49	14812	20792	-.7648A	.0164	.95	-7.8	1.05	3.4	.40	.44	75.7	72.8	-.3471	634650
50	14188	20795	-.6558A	.0162	.95	-8.0	.99	-1.1	.43	.44	75.0	72.2	-.2749	634653
51	14024	20792	-.8461A	.0165	.94	-9.2	.89	-7.4	.47	.43	75.6	73.3	-.0335	634654
52	14171	20795	-.7597A	.0164	1.01	1.2	.95	-3.5	.41	.44	71.2	72.7	-.1634	634655
53	10081	20792	.2342A	.0159	1.03	4.7	1.07	7.0	.46	.48	71.1	71.0	-.0966	634657
54	9026	20795	.5643A	.0162	1.08	9.9	1.21	9.9	.43	.48	71.1	72.3	-.1566	634660
55	10235	20792	.3446A	.0160	1.07	9.8	1.10	8.9	.45	.48	68.8	71.4	-.2451	634661
56	13478	20795	-.4683A	.0160	1.01	.9	1.01	.6	.42	.46	71.0	71.3	-.2675	634662
57	11215	20792	-.0554A	.0159	1.04	5.8	1.06	5.4	.44	.47	69.6	70.6	-.0930	634663
58	14514	20795	-1.7343A	.0191	1.44	9.9	1.79	9.9	.38	.36	72.1	81.3	.7257	634674
59	15169	20792	-1.2282A	.0174	.98	-2.4	1.10	5.5	.41	.40	77.2	76.2	.0221	634678
60	9845	20795	.2803A	.0160	1.02	3.2	1.05	4.9	.46	.48	71.1	71.2	-.0827	634682
61	5378	9313	-.3797	.0238	1.20	9.9	1.29	9.9	.32	.46	63.4	71.0	.0006	646811
62	1707	2892	-.3994	.0429	.92	-4.6	.89	-3.5	.51	.46	74.2	71.1	.0005	646812
63	2067	2862	-1.1485	.0463	.97	-1.5	.94	-1.3	.43	.41	75.9	75.6	.0004	646813
64	2323	2851	-1.7669	.0524	.99	-.5	.94	-.9	.37	.35	81.8	82.0	.0005	646814
65	1906	2994	-.6216	.0428	1.21	9.9	1.29	7.7	.29	.44	64.8	72.4	.0005	646815
66	4768	9311	-.0250	.0237	1.20	9.9	1.28	9.9	.33	.47	63.3	70.7	.0007	646816
67	1981	2826	-1.0227	.0458	1.12	5.8	1.24	5.2	.32	.42	71.6	74.5	.0004	646817
68	1854	2873	-.7048	.0440	.92	-4.2	.86	-3.8	.50	.44	75.1	72.6	.0004	646818
69	1719	2875	-.4631	.0432	1.08	4.4	1.04	1.2	.41	.46	66.8	71.3	.0005	646819
70	1763	2797	-.5854	.0441	1.05	2.8	1.05	1.4	.41	.44	70.0	71.9	.0005	646820
71	4889	9314	-.1025	.0237	1.18	9.9	1.25	9.9	.34	.47	63.6	70.6	.0006	646821
72	2152	2908	-1.2577	.0468	.99	-.5	.96	-.8	.41	.40	78.0	76.7	.0004	646822
73	1499	2923	-.0047	.0423	.91	-5.2	.87	-4.8	.54	.47	73.7	70.6	.0006	646823
74	2262	2855	-1.6030	.0503	1.01	.5	.99	-.2	.36	.37	80.5	80.2	.0004	646824
75	706	2816	1.5573	.0497	1.06	2.2	1.50	9.2	.39	.47	80.2	79.5	.0009	646825
76	1839	2868	-.6615	.0439	.90	-5.8	.85	-4.4	.52	.44	76.1	72.5	.0005	646826
77	2453	2846	-2.1691	.0580	.88	-3.5	.77	-3.0	.40	.31	86.5	86.2	.0005	646827
78	1093	2836	.6934	.0441	.99	-.5	1.04	1.3	.48	.48	73.4	72.8	.0008	646828
79	1643	2828	-.3851	.0433	1.09	4.7	1.11	3.5	.40	.46	68.2	71.1	.0005	646829
80	1476	2891	-.0082	.0424	1.27	9.9	1.41	9.9	.27	.47	59.6	70.5	.0006	646830
81	4849	9214	-.1110	.0238	1.25	9.9	1.35	9.9	.30	.47	60.9	70.7	.0006	646831
82	1968	2973	-.7349	.0436	.88	-6.5	.84	-4.4	.52	.44	78.1	73.1	.0005	646832
83	6876	9323	-1.2798	.0261	.96	-3.5	.89	-4.0	.44	.40	77.1	76.5	.0005	646834
84	1750	2902	-.4518	.0430	1.10	5.3	1.09	2.7	.39	.45	66.6	71.3	.0005	646835
85	1375	2906	.2223	.0426	.92	-4.5	.92	-3.0	.53	.48	74.2	71.0	.0007	646837
86	3524	9345	.6957	.0245	.99	-.6	1.06	3.2	.48	.48	74.3	73.3	.0008	646838
87	1910	2881	-.8191	.0441	1.01	.6	.98	-.5	.43	.43	72.4	72.9	.0005	646839
88	2009	2903	-.9634	.0449	.85	-7.7	.75	-6.2	.53	.42	78.5	74.1	.0004	646840
89	2426	2881	-2.0465	.0549	.98	-.6	.90	-1.3	.34	.33	84.4	84.3	.0005	646841
90	2331	2915	-1.6832	.0504	.84	-6.4	.65	-6.5	.49	.36	83.1	80.7	.0004	646842

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
91	2125	2869	-1.2077	.0471	.86	-6.6	.73	-6.1	.51	.40	79.6	76.7	.0004	646843
92	1623	2902	-.2094	.0427	.85	-8.7	.80	-7.1	.57	.47	76.7	71.0	.0006	646845
93	2240	2797	-1.6654	.0515	.85	-5.7	.78	-3.7	.46	.36	83.7	80.8	.0005	646846
94	6490	9256	-1.0737	.0253	.94	-5.4	.90	-4.3	.46	.42	75.9	74.6	.0005	646848
95	1803	2883	-.5485	.0435	.84	-9.3	.78	-6.9	.57	.45	78.0	72.1	.0005	646849
96	1576	2841	-.1716	.0429	1.13	7.3	1.19	6.0	.37	.46	65.5	70.7	.0006	646851
97	1426	2988	.1852	.0421	1.13	7.0	1.19	6.6	.39	.48	66.9	71.0	.0007	646852
98	1737	2828	-.5438	.0435	1.11	5.9	1.10	2.9	.37	.44	66.4	71.3	.0005	646853
99	1238	2882	.4391	.0432	1.17	8.5	1.25	8.4	.36	.48	66.6	71.9	.0007	646854
100	4064	9237	.3576	.0241	1.11	9.9	1.17	9.9	.40	.48	68.0	71.6	.0008	646855
101	6193	9344	-.8476	.0246	.99	-1.2	.97	-1.5	.45	.44	73.6	73.1	.0005	646856
102	1024	2866	.8399	.0444	1.39	9.9	1.76	9.9	.16	.47	63.1	73.6	.0009	646858
103	684	2929	1.5909	.0489	1.42	9.9	2.00	9.9	.08	.44	72.5	79.8	.0010	646859
104	1813	2854	-.6493	.0437	1.18	9.5	1.43	9.9	.29	.44	66.8	71.7	.0005	646861
105	1268	2893	.4122	.0432	1.02	.9	1.02	.8	.48	.49	71.3	71.9	.0007	646862
106	6086	9306	-.7965	.0245	.98	-1.8	.93	-3.5	.46	.44	72.8	72.8	.0005	646863
107	1377	2830	.1426	.0430	.96	-2.0	.94	-2.2	.50	.48	72.3	70.7	.0007	646864
108	1145	2894	.6567	.0436	.99	-.4	1.03	1.2	.48	.48	73.7	72.6	.0008	646865
109	1717	2809	-.4798	.0439	1.03	1.6	1.06	1.7	.43	.45	71.3	71.7	.0005	646866
110	1264	2805	.3493	.0434	1.02	1.0	1.02	.9	.46	.48	70.4	71.0	.0008	646867

Grade 11 Mathematics

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
1	12498	20827	-.6107A	.0161	.95	-7.5	.94	-4.3	.50	.46	74.0	71.8	.0702	600406
2	12744	20833	-.5618A	.0161	.98	-2.7	.92	-6.3	.47	.46	71.5	71.6	-.0443	600418
3	11840	20827	-.2734A	.0159	.96	-5.8	.92	-7.4	.50	.48	72.3	71.2	-.1011	600419
4	12650	20833	-.6195A	.0161	1.14	9.9	1.26	9.9	.36	.46	67.4	71.8	.0396	600531
5	10948	20827	-.3006A	.0160	1.10	9.9	1.18	9.9	.41	.47	67.9	71.2	.1563	600536
6	11764	20833	-.4369A	.0160	.95	-7.3	.93	-5.6	.51	.47	73.6	71.4	.0852	600540
7	16600	20827	-1.7208A	.0187	.93	-7.9	.86	-6.0	.41	.36	81.4	80.1	-.0122	600562
8	14862	20833	-.9415A	.0166	.94	-8.1	.88	-7.6	.42	.43	74.9	73.2	-.2503	600563
9	11990	20827	-.4263A	.0160	1.14	9.9	1.25	9.9	.36	.47	66.2	71.3	.0153	600573
10	15784	20833	-1.1885A	.0170	.94	-8.0	.88	-7.0	.38	.41	76.7	74.9	-.2849	600592
11	13881	20827	-1.0092A	.0167	.98	-3.2	.91	-5.9	.47	.43	73.4	73.6	.1042	600594
12	14521	20833	-1.1932A	.0171	.92	-9.9	.79	-9.9	.51	.41	75.8	74.9	.1118	600596
13	16197	20827	-1.4554A	.0178	.85	-9.9	.74	-9.9	.45	.39	80.7	77.2	-.1461	600598
14	13476	20833	-.8936A	.0165	.92	-9.9	.86	-9.5	.51	.44	75.4	72.9	.0981	600633
15	14608	20827	-1.0762A	.0168	.87	-9.9	.81	-9.9	.50	.42	78.6	74.1	-.0351	600634
16	10313	20833	-.2202A	.0159	1.02	2.9	1.00	.4	.48	.48	70.4	71.2	.2379	600652
17	12237	20827	-.4395A	.0160	1.02	3.5	.98	-1.5	.45	.47	69.8	71.4	-.0358	600653
18	13935	20833	-.7163A	.0162	.84	-9.9	.77	-9.9	.53	.45	78.1	72.1	-.2123	600660
19	9981	20827	-.0871A	.0159	1.09	9.9	1.09	8.3	.43	.48	67.6	71.3	.1883	600663
20	13173	20833	-.5496A	.0161	1.11	9.9	1.13	9.8	.36	.46	66.5	71.6	-.1723	600666
21	14332	20827	-.9966A	.0167	.95	-7.8	.96	-2.5	.45	.43	76.6	73.5	-.0368	600677
22	11112	20833	-.1284A	.0159	.93	-9.9	.88	-9.9	.53	.48	74.3	71.3	-.0595	600678
23	12701	20827	-.8873A	.0165	1.06	9.1	1.17	9.9	.45	.44	71.9	72.9	.2984	600685
24	17135	20833	-1.8569A	.0192	.87	-9.9	.73	-9.9	.42	.35	83.2	81.6	-.0732	600689
25	13451	20827	-.7196A	.0162	.95	-7.0	.87	-9.9	.48	.45	73.0	72.1	-.0744	600690
26	13357	20833	-.7727A	.0163	1.13	9.9	1.19	9.9	.35	.44	67.8	72.4	.0067	600695
27	12557	20827	-.6047A	.0161	.87	-9.9	.83	-9.9	.55	.46	77.3	71.7	.0486	600702
28	11555	20833	-.5579A	.0161	.89	-9.9	.82	-9.9	.57	.46	75.5	71.6	.2618	600703
29	13209	20827	-.6912A	.0162	.93	-9.9	.92	-6.2	.49	.45	74.6	72.0	-.0373	600704
30	14100	20833	-.8049A	.0164	.92	-9.9	.88	-8.8	.47	.44	75.7	72.5	-.1676	600724
31	11413	20827	-.5290A	.0161	1.03	4.5	1.07	5.5	.47	.46	71.0	71.5	.2685	600728

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
32	12343	20833	-.4395A	.0160	1.03	4.6	1.03	2.3	.44	.47	70.0	71.4	-.0631	600732
33	15429	20827	-1.0409A	.0167	.97	-4.7	1.02	1.1	.37	.42	75.4	73.8	-.3246	600733
34	13422	20833	-.7450A	.0163	.89	-9.9	.83	-9.9	.52	.45	76.1	72.2	-.0396	600737
35	12094	20827	-.5088A	.0161	1.19	9.9	1.26	9.9	.34	.46	64.5	71.5	.0723	600744
36	12664	20833	-.3542A	.0160	.88	-9.9	.83	-9.9	.54	.47	76.3	71.3	-.2353	600746
37	15436	20827	-1.2569A	.0172	.98	-2.8	.89	-6.3	.40	.40	75.9	75.4	-.1006	600756
38	11998	20833	-.3087A	.0160	1.08	9.9	1.06	4.8	.41	.47	67.1	71.2	-.1059	600758
39	9704	20827	-.1253A	.0159	1.38	9.9	1.65	9.9	.22	.48	58.3	71.3	.2980	600767
40	13133	20833	-.6287A	.0162	1.26	9.9	1.74	9.9	.23	.45	64.2	71.8	-.0802	600769
41	13649	20827	-.8559A	.0164	1.02	2.8	1.09	5.5	.42	.44	72.9	72.7	.0112	600770
42	13002	20833	-.5398A	.0161	1.00	.3	.98	-1.8	.44	.46	71.3	71.6	-.1361	600771
43	14681	20827	-1.2252A	.0171	.88	-9.9	.79	-9.9	.52	.41	79.2	75.2	.0972	600775
44	11811	20833	-.5338A	.0161	1.11	9.9	1.19	9.9	.40	.46	67.7	71.6	.1715	600777
45	12603	20827	-.4292A	.0160	1.00	-.3	.96	-3.4	.46	.47	70.9	71.3	-.1430	600795
46	13589	20833	-.5182A	.0161	.86	-9.9	.84	-9.9	.52	.46	77.4	71.5	-.3193	600809
47	13399	20827	-.4976A	.0160	1.10	9.9	1.13	9.7	.36	.46	67.6	71.5	-.2884	600810
48	17957	20833	-2.2082A	.0210	.90	-8.2	.81	-6.7	.36	.31	86.4	85.6	-.0632	600832
49	10738	20827	-.1042A	.0159	1.07	9.9	1.06	5.6	.44	.48	68.8	71.3	.0116	634445
50	13816	20833	-.9243A	.0165	.92	-9.9	.93	-4.3	.49	.43	76.1	73.1	.0358	634446
51	11786	20827	-.0927A	.0159	1.14	9.9	1.17	9.9	.38	.48	66.0	71.3	-.2703	634448
52	12426	20833	-.9232A	.0165	1.09	9.9	1.16	9.9	.46	.43	71.2	73.1	.4069	634449
53	16725	20827	-2.0867A	.0203	1.08	6.4	.88	-4.2	.44	.32	80.9	84.2	.3187	634450
54	7914	20833	.7784A	.0167	1.06	7.8	1.17	9.9	.46	.50	74.1	74.8	-.1329	634454
55	7080	20827	.6409A	.0165	1.15	9.9	1.26	9.9	.36	.50	70.3	73.9	.2336	634457
56	9340	20833	.3987A	.0162	.89	-9.9	.90	-9.9	.57	.50	77.4	72.7	-.1328	634464
57	16173	20827	-1.8000A	.0190	1.02	2.5	.99	-.4	.43	.35	79.2	81.0	.2194	634469
58	17724	20833	-2.1369A	.0206	.89	-9.7	.77	-8.4	.39	.32	85.2	84.8	-.0299	634470
59	11554	20827	-.4923A	.0160	.92	-9.9	.91	-7.7	.54	.46	75.9	71.5	.1951	634476
60	8682	20833	.3931A	.0162	.93	-9.4	.93	-6.9	.54	.50	75.3	72.7	.0443	634477
61	1990	2636	-1.3179	.0499	.83	-7.4	.68	-6.4	.52	.39	81.2	77.4	.0006	646731
62	1598	2596	-.5203	.0457	.98	-.9	.92	-2.1	.47	.46	71.6	71.9	.0007	646732
63	1532	2551	-.4527	.0456	.98	-.8	.96	-1.1	.46	.45	71.7	71.0	.0007	646733
64	582	2601	1.7533	.0531	1.51	9.9	2.78	9.9	-.02	.45	74.6	80.8	.0015	646734
65	4725	10473	.1299	.0228	.85	-9.9	.81	-9.9	.60	.50	78.8	72.5	.0001	646735
66	1209	2627	.3098	.0449	.99	-.5	1.01	.3	.49	.48	72.1	71.3	.0010	646736
67	1666	2546	-.7136	.0469	1.00	.1	1.05	1.3	.44	.44	73.7	72.9	.0006	646737
68	1338	2588	.0214	.0449	1.22	9.9	1.27	8.5	.32	.47	62.5	70.7	.0009	646739
69	7285	10480	-1.1884	.0236	.88	-9.9	.82	-7.7	.50	.41	78.0	73.7	-.0001	646740
70	1059	2549	.5987	.0464	1.14	6.4	1.20	6.1	.39	.49	67.9	72.5	.0011	646741
71	900	2531	.9244	.0476	1.16	6.8	1.26	7.0	.37	.48	69.0	74.1	.0013	646742
72	709	2668	1.4284	.0499	1.21	7.8	1.56	9.9	.29	.47	74.3	78.4	.0014	646743
73	1532	2554	-.4175	.0458	1.01	.3	1.00	.1	.45	.46	71.5	71.3	.0007	646744
74	5168	10446	-.1058	.0226	1.09	8.8	1.09	5.6	.43	.49	68.6	71.6	.0001	646745
75	532	2619	1.8980	.0549	.94	-2.0	1.30	4.7	.45	.45	84.5	82.5	.0016	646746
76	1439	2506	-.2493	.0463	1.05	2.3	1.05	1.5	.45	.47	70.2	71.5	.0008	646747
77	1722	2609	-.7848	.0464	1.07	3.5	1.04	1.0	.39	.44	69.7	72.8	.0006	646753
78	934	2585	.8924	.0472	.88	-5.8	.88	-3.6	.57	.49	79.2	74.4	.0012	646754
79	2100	2594	-1.7104	.0543	.83	-6.1	.62	-6.3	.49	.36	83.7	81.5	.0006	646755
80	1341	2643	.1051	.0446	.84	-9.4	.81	-7.1	.59	.48	78.5	71.0	.0009	646756
81	5898	10517	-.4487	.0225	.91	-9.6	.86	-8.3	.53	.47	74.3	71.3	.0000	646757
82	1438	2569	-.2281	.0453	.90	-5.8	.83	-5.7	.55	.47	74.4	71.0	.0008	646758
83	1144	2584	.4166	.0456	1.11	5.5	1.14	4.7	.41	.49	67.5	71.8	.0010	646759
84	1643	2603	-.5765	.0460	1.01	.5	.97	-.6	.44	.45	71.4	72.2	.0006	646760
85	1013	2613	.7082	.0458	1.23	9.9	1.35	9.9	.30	.48	64.8	72.6	.0012	646761
86	4410	10456	.2944	.0230	1.05	4.9	1.10	6.3	.46	.50	72.4	73.0	.0002	646762
87	1779	2580	-.9345	.0474	.94	-2.9	.87	-3.2	.47	.42	74.7	73.7	.0006	646765
88	1051	2528	.5377	.0462	1.08	3.9	1.11	3.6	.42	.48	69.4	72.1	.0011	646768
89	1434	2591	-.1786	.0449	.93	-3.8	.89	-3.7	.52	.46	73.3	70.7	.0008	646769
90	5356	10449	-.2004	.0225	.98	-2.3	.93	-4.2	.50	.49	72.5	71.5	.0001	646770
91	5539	10400	-.3135	.0226	.90	-9.9	.87	-8.4	.55	.48	76.1	71.3	.0000	646771

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Math
92	1666	2581	-.6651	.0465	.93	-3.5	.99	-.2	.49	.45	76.8	72.7	.0006	646772
93	1556	2582	-.3880	.0457	.77	-9.9	.69	-9.8	.62	.46	81.3	71.7	.0007	646773
94	751	2644	1.2877	.0493	.98	-.9	1.08	1.8	.48	.47	78.3	77.4	.0014	646774
95	1973	2630	-1.2800	.0498	.84	-7.0	.72	-5.7	.52	.40	81.1	77.3	.0006	646775
96	3986	10462	.5213	.0234	.86	-9.9	.83	-9.9	.60	.51	79.6	74.4	.0002	646776
97	973	2558	.7345	.0467	.95	-2.3	1.00	-.1	.51	.48	76.7	73.4	.0011	646777
98	734	2605	1.3433	.0498	1.12	4.7	1.27	5.8	.38	.48	75.5	77.7	.0013	646778
99	1394	2573	-.1188	.0449	1.28	9.9	1.49	9.9	.24	.47	59.6	70.5	.0008	646779
100	1160	2609	.4130	.0452	1.04	1.8	1.05	1.7	.46	.48	70.6	71.6	.0010	646780
101	3991	10472	.5255	.0234	1.24	9.9	1.37	9.9	.34	.51	67.6	74.3	.0002	646781
102	926	2633	.8761	.0468	1.01	.3	1.08	2.4	.47	.48	75.5	74.5	.0011	646782
103	888	2616	.9968	.0472	1.06	2.5	1.15	4.1	.43	.48	73.8	74.7	.0012	646783
104	1284	2601	.1306	.0452	.89	-5.8	.85	-5.2	.56	.49	76.0	71.5	.0009	646784
105	1946	2616	-1.2534	.0492	.99	-.6	.99	-.2	.40	.39	76.9	76.4	.0005	646785
106	6050	10520	-.5163	.0226	.93	-8.1	.86	-8.1	.52	.47	74.2	71.4	.0000	646786
107	954	2608	.8304	.0466	1.05	2.5	1.08	2.4	.44	.48	72.5	73.8	.0012	646787
108	1963	2625	-1.2879	.0495	.92	-3.3	.81	-3.6	.45	.39	78.2	76.8	.0006	646788
109	1509	2559	-.3946	.0456	1.11	5.9	1.21	5.9	.37	.46	67.7	71.1	.0007	646789
110	1177	2514	.2373	.0459	1.09	4.4	1.13	4.3	.42	.49	69.0	71.5	.0009	646790

Appendix U: Science Item Bank Difficulties

Grade 5 Science

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Science
1	17228	21692	-1.5924A	.0180	.93	-6.9	.88	-7.1	.39	.34	80.9	80.0	-.0123	634836
2	12122	21690	-.2906A	.0151	1.07	9.9	1.10	9.9	.35	.41	65.2	68.2	.0071	634838
3	13783	21692	-.6709A	.0155	.97	-4.4	.95	-4.8	.42	.40	71.4	70.2	.0021	634839
4	19243	21692	-2.3779A	.0223	.95	-3.6	.84	-6.1	.31	.27	88.8	88.5	-.0263	634840
5	19538	21692	-2.5325A	.0235	.85	-9.6	.58	-9.9	.40	.26	90.2	89.8	-.0290	634844
6	18303	21690	-1.9687A	.0197	.88	-9.9	.80	-9.8	.41	.31	85.3	84.4	-.0187	634845
7	15394	21692	-1.0680A	.0162	.92	-9.9	.92	-6.3	.44	.38	76.9	73.9	-.0040	634849
8	15830	21692	-1.1839A	.0166	1.08	9.9	1.19	9.9	.28	.37	73.4	75.2	-.0056	634852
9	12034	21690	-.2710A	.0151	1.00	.9	1.00	-.3	.41	.41	67.9	68.1	.0074	634854
10	11944	21690	-.2509A	.0150	1.05	9.0	1.05	6.1	.37	.41	65.4	68.1	.0077	634856
11	21677	21690	-7.6366A	.2439	.74	-1.1	.64	-7.1	.04	.03	99.9	99.9	-.1301	634859
12	18475	21690	-2.0367A	.0201	.85	-9.9	.63	-9.9	.45	.30	86.0	85.1	-.0198	634861
13	14305	21692	-.7955A	.0157	.94	-8.8	.92	-7.8	.44	.39	73.2	71.3	.0003	634864
14	10519	21690	.0663A	.0150	1.00	.7	1.01	1.1	.42	.42	67.5	67.8	.0114	634868
15	16825	21692	-1.4675A	.0175	.95	-5.5	.91	-5.6	.39	.35	79.5	78.6	-.0101	634873
16	14709	21692	-.8945A	.0159	.92	-9.9	.87	-9.9	.46	.39	74.9	72.2	-.0010	634874
17	16856	21690	-1.4771A	.0175	1.00	-.4	1.03	1.5	.34	.35	79.4	78.7	-.0103	634876
18	16803	21690	-1.4608A	.0175	.90	-9.9	.81	-9.9	.44	.35	80.2	78.5	-.0103	634880
19	19420	21692	-2.4688A	.0230	.95	-2.9	.90	-3.4	.29	.26	89.7	89.3	-.0277	634885
20	11936	21692	-.2488A	.0150	1.08	9.9	1.09	9.9	.35	.41	63.9	68.0	.0075	634886
21	11402	21692	-.1299A	.0150	1.14	9.9	1.20	9.9	.29	.42	61.6	67.8	.0091	634889
22	16581	21690	-1.3954A	.0172	.98	-2.0	.93	-4.5	.37	.35	77.8	77.7	-.0088	634894
23	14538	21692	-.8523A	.0158	1.17	9.9	1.31	9.9	.23	.39	66.6	71.8	-.0004	634900
24	8354	21690	.5584A	.0154	.99	-1.0	1.02	2.6	.42	.42	71.4	70.0	.0166	634901
25	12433	21692	-.3604A	.0151	1.07	9.9	1.10	9.9	.35	.41	65.5	68.4	.0062	634905
26	13970	21690	-.7151A	.0155	.89	-9.9	.83	-9.9	.50	.40	74.6	70.6	.0013	634906
27	14798	21692	-.9166A	.0159	.97	-3.9	.95	-4.6	.41	.38	73.1	72.4	-.0014	634911
28	15308	21692	-1.0459A	.0162	1.02	2.2	1.02	1.3	.36	.38	73.2	73.7	-.0035	634916
29	14333	21690	-.8024A	.0157	.99	-2.2	.97	-3.1	.41	.39	71.2	71.3	.0002	634917
30	14616	21690	-.8715A	.0158	.97	-4.6	.92	-7.0	.42	.39	72.3	71.9	-.0009	634921
31	15371	21692	-1.0622A	.0162	.93	-9.9	.85	-9.9	.45	.38	75.7	73.9	-.0037	634922
32	13971	21690	-.7155A	.0155	.87	-9.9	.80	-9.9	.52	.40	75.3	70.6	.0015	634929
33	10569	21692	.0552A	.0150	1.09	9.9	1.12	9.9	.34	.42	63.9	67.8	.0113	634930
34	14347	21690	-.8057A	.0157	.94	-9.9	.89	-9.9	.45	.39	73.6	71.3	.0000	634934
35	17379	21692	-1.6410A	.0182	.95	-5.5	.88	-6.6	.38	.33	81.4	80.6	-.0132	634936
36	10862	21690	-.0099A	.0150	1.19	9.9	1.26	9.9	.25	.42	59.7	67.8	.0104	634938
37	17379	21692	-1.6410A	.0182	1.06	5.7	1.13	6.6	.27	.33	79.9	80.6	-.0132	634939
38	20328	21690	-3.0586A	.0284	.98	-.9	1.18	4.2	.19	.21	93.7	93.5	-.0388	634942
39	11259	21692	-.0982A	.0150	1.05	9.6	1.07	8.2	.37	.42	65.4	67.8	.0096	634943
40	10401	21692	.0926A	.0150	1.04	7.4	1.05	6.7	.38	.42	66.1	67.9	.0118	634945
41	17228	21690	-1.5928A	.0180	.94	-5.9	.84	-9.2	.39	.34	80.6	80.1	-.0122	634947
42	11946	21690	-.2513A	.0150	1.00	.1	1.00	.4	.41	.41	68.3	68.1	.0077	634950
43	16204	21690	-1.2874A	.0169	.93	-9.1	.90	-7.1	.42	.36	78.4	76.4	-.0069	634956
44	16521	21690	-1.3775A	.0172	.99	-1.1	.95	-3.0	.36	.35	77.7	77.5	-.0089	634958
45	9997	21690	.1828A	.0150	1.03	5.4	1.07	8.6	.39	.42	68.2	68.1	.0127	634961
46	14470	21690	-.8360A	.0157	1.13	9.9	1.23	9.9	.27	.39	67.7	71.6	.0000	634962
47	13667	21692	-.6435A	.0154	.91	-9.9	.86	-9.9	.48	.40	73.5	70.0	.0023	634963
48	14536	21692	-.8518A	.0158	1.00	.3	1.00	.0	.39	.39	71.8	71.8	-.0004	634968
49	14893	21692	-.9403A	.0160	.94	-8.2	.88	-9.9	.44	.38	73.5	72.6	-.0018	634969
50	12164	21690	-.3001A	.0151	1.09	9.9	1.13	9.9	.33	.41	64.5	68.2	.0070	634979
51	2343	3642	-.6618	.0378	1.09	6.0	1.16	5.9	.30	.39	67.2	70.5	.0001	647385
52	3638	3789	-3.5446	.0848	.91	-1.2	.62	-3.7	.28	.17	96.0	96.0	.0024	647386
53	2329	6858	.7194	.0283	1.01	.7	1.11	5.7	.40	.42	73.6	72.6	-.0008	647387
54	1125	3664	1.0367	.0392	1.24	9.9	1.36	9.9	.17	.40	66.5	73.6	-.0014	647388
55	2895	3708	-1.4345	.0426	.89	-4.9	.79	-5.7	.45	.34	80.9	79.0	.0007	647389

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Science
56	2821	3748	-1.2829	.0408	1.02	.8	1.04	1.1	.33	.35	77.0	76.8	.0007	647390
57	4438	6915	-.8289	.0276	1.14	9.9	1.29	9.9	.27	.40	66.4	70.7	.0007	647391
58	3345	3749	-2.3928	.0552	.91	-2.3	.79	-3.1	.35	.27	89.5	89.3	.0015	647392
59	1826	3679	.0804	.0363	.96	-3.1	.96	-2.0	.45	.41	70.0	67.6	-.0006	647393
60	2866	3730	-1.3649	.0417	1.01	.7	1.05	1.4	.33	.35	77.2	78.1	.0007	647394
61	2072	3718	-.2496	.0363	1.29	9.9	1.41	9.9	.14	.41	54.8	67.9	-.0002	647395
62	1805	3679	.0756	.0363	1.06	4.7	1.08	4.1	.36	.41	64.2	67.5	-.0005	647396
63	1318	3705	.7926	.0378	1.03	1.7	1.07	2.7	.38	.41	71.1	71.3	-.0013	647397
64	5562	6818	-1.8796	.0334	.89	-6.2	.84	-4.8	.43	.33	83.5	82.1	.0016	647398
65	2810	3711	-1.3000	.0412	.91	-4.5	.80	-5.8	.44	.35	78.3	77.1	.0007	647399
66	3247	3776	-2.0760	.0495	.98	-.7	.99	-.1	.31	.29	86.1	86.1	.0013	647400
67	2713	3703	-1.1647	.0402	.94	-3.4	.89	-3.4	.42	.36	77.3	75.3	.0006	647401
68	1795	3734	.1413	.0360	1.08	6.1	1.11	6.0	.33	.41	64.4	67.4	-.0006	647402
69	3288	3708	-2.3159	.0544	.96	-1.1	.89	-1.7	.31	.27	88.9	88.7	.0014	647403
70	3483	3691	-3.1585	.0734	.92	-1.4	.57	-4.9	.31	.20	94.4	94.4	.0021	647404
71	3282	3700	-2.3450	.0544	1.01	.4	1.22	3.1	.23	.26	88.9	88.7	.0015	647405
72	2077	3585	-.3392	.0372	.95	-3.4	.94	-2.8	.45	.41	70.8	68.4	-.0002	647406
73	3435	3657	-3.0804	.0714	.92	-1.4	.62	-4.3	.31	.20	93.9	93.9	.0021	647407
74	5725	6872	-2.0328	.0345	.87	-6.6	.71	-8.1	.44	.32	84.3	83.6	.0017	647408
75	6558	6921	-3.4121	.0555	.93	-1.6	.62	-5.6	.29	.20	94.8	94.8	.0027	647409
76	2034	3739	-.1467	.0360	1.12	8.7	1.16	7.7	.30	.41	62.6	67.5	-.0003	647410
77	3255	3802	-2.0162	.0488	1.05	1.6	1.17	3.0	.23	.29	85.8	85.8	.0012	647411
78	4699	6857	-1.0535	.0285	1.16	9.9	1.32	9.9	.24	.39	68.6	72.8	.0009	647412
79	2190	3710	-.3909	.0366	.84	-9.9	.79	-9.9	.55	.40	75.7	68.6	-.0001	647413
80	2152	3680	-.3740	.0367	.96	-3.2	.93	-3.2	.44	.40	70.4	68.4	-.0001	647414
81	2833	3743	-1.2874	.0410	1.07	3.5	1.14	3.7	.28	.35	76.1	77.2	.0006	647415
82	6117	6912	-2.5169	.0396	1.00	.1	1.13	2.5	.26	.27	88.7	88.6	.0021	647416
83	2639	3676	-1.0488	.0397	.87	-7.7	.77	-7.5	.49	.37	77.4	74.4	.0005	647417
84	3022	3606	-1.8589	.0479	.94	-2.1	.92	-1.6	.37	.30	84.3	84.0	.0011	647418
85	2650	3782	-.9771	.0385	.97	-1.8	.92	-2.7	.41	.37	73.9	73.3	.0004	647419
86	1939	3678	-.1044	.0362	.99	-.8	.99	-.4	.41	.41	68.0	67.3	-.0003	647420
87	1310	3775	.8106	.0376	1.16	9.7	1.35	9.9	.24	.41	67.3	71.6	-.0012	647421
88	2841	3767	-1.2859	.0407	.94	-3.0	.92	-2.4	.40	.35	78.6	76.9	.0007	647422
89	1433	3652	.5916	.0374	.89	-7.6	.92	-3.9	.51	.42	74.9	69.9	-.0010	647423
90	2689	3612	-1.2072	.0412	.92	-4.2	.88	-3.6	.43	.36	78.7	76.2	.0006	647424
91	3560	3752	-3.2787	.0762	.91	-1.4	.66	-3.6	.30	.20	94.9	94.9	.0023	647425
92	5242	6863	-1.5255	.0308	1.06	4.0	1.13	4.2	.30	.36	77.1	77.9	.0013	647426
93	1940	3821	.0324	.0356	.99	-.8	.99	-.7	.42	.41	68.7	67.5	-.0005	647427
94	2414	3666	-.7562	.0380	1.03	2.2	1.05	1.9	.36	.39	69.5	71.1	.0003	647428
95	2500	3679	-.8343	.0385	1.06	3.3	1.16	5.3	.32	.39	71.7	72.3	.0002	647429
96	2564	3684	-.9274	.0389	.98	-1.3	.95	-1.5	.39	.37	73.6	72.9	.0003	647430
97	6404	6839	-3.2222	.0512	.95	-1.3	.95	-.7	.26	.21	93.7	93.7	.0026	647431
98	3133	3614	-2.1245	.0516	.92	-2.5	.74	-4.6	.38	.28	86.9	86.8	.0013	647432
99	4497	6826	-.9130	.0280	1.17	9.9	1.21	9.8	.25	.40	64.9	71.3	.0008	647433
100	2307	3715	-.5457	.0370	1.03	1.8	1.07	2.9	.37	.40	69.1	69.4	.0001	647434

Grade 8 Science

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Science
1	12132	20815	-.4024A	.0154	1.07	9.9	1.10	9.9	.33	.40	65.2	68.2	.0033	635003
2	15391	20800	-1.2330A	.0170	.95	-5.9	.94	-4.4	.40	.36	77.4	75.9	-.0051	635004
3	9242	20800	.2617A	.0153	1.02	3.8	1.04	5.4	.38	.40	66.9	67.6	.0094	635005
4	12108	20815	-.3968A	.0154	1.03	4.5	1.02	2.0	.38	.40	66.8	68.2	.0033	635007
5	11076	20800	-.1592A	.0152	1.16	9.9	1.21	9.9	.25	.40	59.3	67.3	.0056	635008
6	9114	20815	.2923A	.0153	1.05	9.2	1.10	9.9	.35	.40	66.1	67.7	.0096	635009

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Science
7	13038	20800	-.6189A	.0156	1.02	2.6	1.02	1.6	.38	.39	68.9	69.7	.0010	635011
8	8653	20815	.3999A	.0154	1.06	9.7	1.09	9.9	.34	.40	66.3	68.2	.0106	635014
9	11757	20815	-.3150A	.0153	.95	-9.6	.92	-9.9	.45	.40	69.7	67.8	.0040	635019
10	15920	20800	-1.3892A	.0175	.92	-9.1	.88	-7.6	.42	.35	79.7	77.7	-.0072	635022
11	14850	20815	-1.0795A	.0166	1.01	1.0	.97	-2.5	.37	.37	73.3	74.2	-.0037	635025
12	11624	20800	-.2854A	.0153	.99	-2.4	.97	-3.1	.41	.40	68.3	67.7	.0044	635028
13	14798	20815	-1.0655A	.0165	1.22	9.9	1.32	9.9	.16	.37	67.5	74.0	-.0034	635030
14	13140	20800	-.6437A	.0157	1.07	9.9	1.12	9.9	.31	.39	67.0	69.9	.0008	635031
15	7103	20815	.7761A	.0159	.98	-3.7	1.01	1.2	.41	.39	72.7	71.2	.0138	635034
16	9982	20800	.0913A	.0152	1.12	9.9	1.17	9.9	.29	.41	62.5	67.1	.0079	635035
17	13095	20815	-.6314A	.0156	1.07	9.9	1.05	5.5	.33	.39	65.8	69.8	.0010	635037
18	9137	20800	.2861A	.0153	1.08	9.9	1.12	9.9	.32	.40	64.4	67.7	.0096	635041
19	14598	20815	-1.0116A	.0164	.94	-8.7	.90	-8.3	.43	.37	75.5	73.4	-.0030	635043
20	13597	20800	-.7561A	.0159	1.16	9.9	1.22	9.9	.23	.38	64.7	70.8	-.0003	635046
21	10698	20815	-.0716A	.0152	1.02	3.8	1.02	2.8	.38	.40	66.1	67.1	.0064	635051
22	13411	20815	-.7084A	.0158	1.00	-.5	.98	-2.1	.39	.39	70.1	70.4	.0000	635053
23	17848	20800	-2.0804A	.0209	1.04	3.1	1.34	9.9	.21	.29	85.9	85.7	-.0151	635056
24	16678	20815	-1.6302A	.0185	.96	-4.4	.87	-7.2	.38	.33	81.2	80.6	-.0100	635058
25	13744	20800	-.7929A	.0159	.93	-9.9	.88	-9.9	.46	.38	73.5	71.2	-.0006	635059
26	15008	20815	-1.1227A	.0167	.91	-9.9	.82	-9.9	.46	.36	76.1	74.6	-.0043	635063
27	18148	20800	-2.2158A	.0217	.93	-5.1	.93	-2.7	.33	.28	87.5	87.1	-.0170	635066
28	15802	20815	-1.3511A	.0174	.97	-3.2	.93	-4.7	.38	.35	77.5	77.3	-.0067	635067
29	16568	20800	-1.5964A	.0184	.88	-9.9	.75	-9.9	.46	.33	82.0	80.2	-.0093	635071
30	14088	20815	-.8785A	.0161	1.00	-.6	.98	-1.4	.38	.38	72.0	72.0	-.0015	635075
31	13589	20800	-.7540A	.0159	1.09	9.9	1.10	9.0	.30	.38	66.9	70.8	-.0004	635079
32	15803	20815	-1.3515A	.0174	.98	-2.4	1.07	4.2	.35	.35	78.6	77.3	-.0066	635082
33	16405	20800	-1.5423A	.0181	.86	-9.9	.76	-9.9	.47	.34	81.9	79.6	-.0089	635083
34	16651	20815	-1.6213A	.0185	.92	-7.7	.92	-4.5	.39	.33	81.6	80.5	-.0096	635087
35	13944	20800	-.8434A	.0160	.98	-3.4	1.00	-.1	.40	.38	72.9	71.7	-.0012	635091
36	9844	20815	.1239A	.0152	.93	-9.9	.92	-9.9	.47	.41	70.7	67.2	.0081	635094
37	18750	20800	-2.5291A	.0241	.92	-4.7	.79	-7.5	.33	.25	90.2	90.0	-.0212	635095
38	15284	20815	-1.2000A	.0169	.91	-9.9	.84	-9.9	.45	.36	77.2	75.5	-.0050	635096
39	18332	20800	-2.3049A	.0223	.85	-9.9	.61	-9.9	.43	.27	88.3	88.0	-.0181	635098
40	15236	20815	-1.1865A	.0169	.91	-9.9	.85	-9.9	.45	.36	77.6	75.4	-.0048	635102
41	12898	20800	-.5853A	.0156	.96	-7.3	.91	-9.3	.44	.39	70.8	69.4	.0015	635110
42	13899	20815	-.8303A	.0160	.96	-5.9	.92	-7.1	.42	.38	72.4	71.5	-.0011	635111
43	17721	20800	-2.0262A	.0205	.90	-7.9	.75	-9.9	.40	.30	85.7	85.2	-.0144	635114
44	9910	20815	.1088A	.0152	1.06	9.9	1.07	8.6	.35	.41	64.3	67.2	.0079	635115
45	13858	20800	-.8216A	.0160	.93	-9.9	.87	-9.9	.46	.38	73.3	71.5	-.0010	635116
46	15460	20800	-1.2525A	.0171	.92	-9.5	.86	-9.9	.43	.36	77.6	76.1	-.0058	635117
47	8285	20815	.4869A	.0155	1.09	9.9	1.14	9.9	.31	.40	65.6	68.8	.0114	635119
48	9395	20800	.2264A	.0153	1.08	9.9	1.12	9.9	.33	.40	63.9	67.5	.0090	635125
49	18551	20815	-2.4126A	.0231	.85	-9.9	.58	-9.9	.42	.26	89.2	89.0	-.0192	635126
50	9114	20800	.2914A	.0153	.98	-4.2	.99	-1.7	.42	.40	69.2	67.7	.0097	635128
51	14333	20815	-.9418A	.0162	.94	-8.2	.90	-9.0	.43	.38	74.0	72.7	-.0023	635132
52	18419	20800	-2.3493A	.0227	.88	-8.3	.68	-9.9	.39	.27	88.7	88.4	-.0183	635137
53	11225	20815	-.1923A	.0152	1.09	9.9	1.10	9.9	.32	.40	62.8	67.4	.0052	635144
54	14560	20815	-1.0016A	.0164	1.09	9.9	1.15	9.9	.28	.37	71.1	73.3	-.0028	635148
55	16855	20800	-1.6945A	.0188	.89	-9.9	.79	-9.9	.43	.32	82.9	81.4	-.0108	635153
56	16390	20815	-1.5347A	.0181	.97	-3.3	.96	-2.3	.36	.34	80.3	79.5	-.0087	635155
57	16888	20800	-1.7061A	.0189	.95	-4.6	.83	-9.3	.38	.32	81.9	81.5	-.0109	635157
58	15706	20815	-1.3224A	.0173	.88	-9.9	.81	-9.9	.46	.35	79.7	76.9	-.0064	635159
59	12669	20800	-.5303A	.0155	1.02	2.5	1.02	2.0	.38	.39	68.6	69.0	.0019	635162
60	14117	20800	-.8875A	.0161	1.11	9.9	1.19	9.9	.27	.38	68.4	72.1	-.0018	635233
61	3680	6174	-.5672	.0284	1.01	.7	1.04	2.4	.39	.40	69.5	68.9	.0003	647100
62	2115	3651	-.3717	.0365	1.09	6.3	1.13	6.5	.30	.39	64.6	67.8	.0006	647101
63	2422	3670	-.7754	.0378	.93	-4.8	.89	-4.6	.45	.38	73.6	71.0	.0005	647102
64	2202	3651	-.4521	.0370	.97	-1.9	.94	-2.9	.43	.40	69.6	68.8	.0006	647103
65	2837	6088	.0912	.0283	1.12	9.9	1.16	9.9	.30	.41	62.6	67.7	.0005	647104
66	1964	3724	-.1015	.0361	1.10	7.2	1.12	6.0	.32	.41	62.2	67.5	.0006	647105

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Science
67	1917	3680	-.0619	.0361	.87	-9.9	.85	-8.6	.52	.40	74.0	66.9	.0007	647106
68	3339	6161	-.2846	.0281	.99	-1.1	.97	-1.8	.42	.41	68.0	68.0	.0004	647107
69	2530	3657	-.9351	.0387	1.07	4.0	1.09	3.2	.30	.37	70.4	72.6	.0005	647108
70	1527	3615	.4134	.0368	1.05	3.9	1.11	5.3	.34	.40	66.5	68.0	.0008	647109
71	2203	3661	-.4192	.0367	1.01	.8	1.01	.5	.38	.39	67.7	68.4	.0006	647111
72	2932	3691	-1.5384	.0435	1.02	.7	1.10	2.2	.30	.33	80.3	80.1	.0004	647112
73	1649	3753	.3419	.0359	1.07	5.1	1.12	6.0	.33	.40	65.2	67.3	.0008	647113
74	1720	3654	.1742	.0361	1.12	8.9	1.15	8.1	.28	.39	60.8	66.7	.0008	647114
75	2751	3621	-1.3270	.0418	.98	-.9	.95	-1.3	.37	.35	78.0	77.5	.0004	647115
76	2890	3691	-1.4770	.0428	1.14	5.7	1.34	7.4	.19	.34	77.5	79.2	.0004	647117
77	982	3732	1.2479	.0402	1.05	2.3	1.18	5.4	.31	.37	75.9	76.2	.0009	647118
78	1427	3598	.5283	.0372	.99	-.9	1.04	1.7	.40	.40	70.6	68.8	.0008	647119
79	1909	3594	-.1261	.0365	1.00	.3	1.00	-.2	.39	.40	66.1	66.9	.0007	647120
80	915	3706	1.3648	.0412	.99	-.3	1.05	1.4	.37	.37	77.9	77.3	.0009	647121
81	1664	3746	.3077	.0359	1.03	2.0	1.03	1.8	.37	.40	66.3	67.4	.0008	647122
82	3525	6169	-.4287	.0283	1.05	4.4	1.05	3.3	.36	.41	66.2	68.4	.0004	647123
83	1885	3664	-.0571	.0362	1.06	4.7	1.08	4.1	.34	.40	64.4	67.0	.0007	647124
84	2134	3567	-.4269	.0373	1.05	3.6	1.05	2.4	.35	.39	65.7	68.5	.0006	647128
85	3471	3669	-3.1755	.0750	.98	-.3	1.02	.3	.21	.19	94.6	94.6	.0007	647129
86	1923	3634	-.0763	.0363	1.18	9.9	1.28	9.9	.21	.40	59.6	66.8	.0007	647130
87	4725	6184	-1.4907	.0322	.93	-4.5	.86	-5.1	.43	.35	79.7	77.7	.0002	647132
88	2927	3696	-1.5230	.0431	.96	-1.6	.89	-2.8	.37	.32	79.7	79.9	.0005	647133
89	2734	3655	-1.2580	.0409	.91	-4.7	.82	-5.4	.44	.35	78.4	76.4	.0005	647134
90	1600	3680	.3354	.0363	1.18	9.9	1.25	9.9	.22	.40	59.8	67.6	.0008	647135
91	4457	6174	-1.2164	.0308	.95	-3.6	.88	-4.9	.43	.37	76.0	75.0	.0002	647136
92	2725	3668	-1.2255	.0407	.92	-4.1	.84	-5.0	.44	.36	77.6	76.2	.0005	647138
93	845	3716	1.4742	.0422	1.11	4.7	1.33	8.3	.23	.36	77.7	78.9	.0009	647140
94	2412	3742	-.6750	.0372	.98	-1.1	.99	-.5	.40	.38	71.1	70.2	.0006	647141
95	1947	3624	-.1196	.0363	1.11	8.5	1.14	7.4	.28	.39	61.6	66.8	.0007	647142
96	3268	6160	-.2183	.0281	.94	-5.5	.93	-5.0	.46	.41	70.5	67.7	.0004	647145
97	2761	3569	-1.4152	.0428	1.05	2.2	1.10	2.6	.28	.34	78.0	78.4	.0005	647146
98	4674	6113	-1.4988	.0325	.91	-5.5	.86	-4.8	.44	.35	79.8	77.8	.0002	647147
99	941	3585	1.2637	.0411	1.11	5.4	1.24	7.0	.25	.37	73.8	76.2	.0009	647148
100	4956	6110	-1.8157	.0350	.99	-.5	.99	-.2	.34	.33	82.4	81.6	.0002	647149
101	1814	3673	.0734	.0361	1.03	2.6	1.04	2.2	.37	.40	65.6	67.0	.0008	647150
102	3097	3639	-1.9763	.0491	.97	-1.0	.92	-1.5	.33	.29	85.4	85.2	.0004	647151
103	2551	3716	-.9136	.0382	1.05	2.9	1.11	4.1	.31	.37	71.6	72.4	.0005	647152
104	2463	3826	-.6625	.0366	1.00	-.3	1.01	.6	.38	.38	70.8	70.2	.0006	647154
105	1774	3572	.0435	.0366	1.13	9.5	1.16	8.1	.28	.40	59.4	66.7	.0007	647155
106	3313	6150	-.2644	.0281	1.03	3.2	1.03	2.2	.38	.41	65.9	67.7	.0004	647156
107	1907	3653	-.0661	.0363	.93	-5.2	.91	-4.8	.47	.40	70.8	67.2	.0007	647157
108	1446	3661	.5374	.0369	1.08	5.7	1.12	5.8	.31	.40	65.2	68.9	.0008	647158
109	2864	3626	-1.5259	.0436	.92	-3.5	.84	-3.9	.42	.33	80.7	79.8	.0004	647159
110	3007	3662	-1.7453	.0459	.92	-3.0	.88	-2.7	.39	.32	83.3	82.4	.0004	647220

Grade 11 Science

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Science
1	12497	20828	-.5041A	.0156	1.01	1.7	1.01	.8	.40	.41	69.2	69.5	.0005	635172
2	11997	20805	-.3861A	.0155	.96	-6.0	.96	-4.3	.45	.42	70.2	68.9	.0006	635180
3	12780	20828	-.5729A	.0157	.87	-9.9	.81	-9.9	.53	.41	75.4	69.9	.0003	635181
4	17537	20805	-1.9918A	.0202	.98	-1.6	.93	-3.2	.33	.31	84.5	84.4	-.0057	635185
5	13849	20828	-.8407A	.0161	1.08	9.9	1.08	6.5	.33	.40	68.7	71.8	-.0003	635187
6	11853	20805	-.3517A	.0154	.89	-9.9	.86	-9.9	.51	.42	73.7	68.7	.0006	635192
7	14259	20828	-.9478A	.0163	.96	-6.4	.91	-7.4	.44	.39	73.9	72.7	-.0005	635197
8	12959	20805	-.6196A	.0157	.93	-9.9	.92	-8.6	.47	.41	73.6	70.2	.0003	635200

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Science
9	11538	20828	-.2746A	.0154	1.27	9.9	1.34	9.9	.17	.42	56.0	68.5	.0006	635209
10	14058	20805	-.8982A	.0162	1.09	9.9	1.17	9.9	.30	.39	70.1	72.3	-.0004	635211
11	12017	20828	-.3885A	.0155	1.12	9.9	1.18	9.9	.30	.42	64.0	68.9	.0005	635217
12	12352	20805	-.4714A	.0156	1.09	9.9	1.15	9.9	.33	.41	65.9	69.3	.0005	635218
13	7264	20828	.7534A	.0160	1.00	.6	1.07	6.4	.40	.41	72.3	71.7	-.0003	635232
14	11641	20805	-.3012A	.0154	1.05	7.7	1.04	4.5	.38	.42	65.7	68.6	.0006	635237
15	9387	20828	.2323A	.0154	1.08	9.9	1.11	9.9	.35	.42	65.9	68.5	.0005	635238
16	11622	20805	-.2967A	.0154	.92	-9.9	.90	-9.9	.49	.42	72.5	68.5	.0006	635243
17	11818	20828	-.3411A	.0154	1.10	9.9	1.17	9.9	.32	.42	64.6	68.7	.0006	635245
18	9521	20805	.1989A	.0154	1.04	6.0	1.07	7.8	.39	.42	68.0	68.4	.0005	635251
19	15135	20828	-1.1875A	.0169	.98	-1.9	1.04	2.7	.38	.38	76.6	75.1	-.0013	635263
20	14206	20805	-.9370A	.0163	.97	-4.5	.90	-8.1	.43	.39	72.6	72.6	-.0006	635265
21	13283	20828	-.6974A	.0158	1.02	2.5	1.00	.1	.39	.40	69.5	70.7	.0002	635274
22	11771	20805	-.3321A	.0154	1.04	5.9	1.02	2.7	.39	.42	66.4	68.7	.0006	635275
23	14707	20828	-1.0682A	.0166	.89	-9.9	.83	-9.9	.48	.38	77.3	73.9	-.0010	635279
24	9104	20805	.2981A	.0155	.95	-8.0	.95	-6.2	.46	.42	71.2	68.8	.0005	635280
25	17599	20828	-2.0098A	.0203	.90	-8.0	.88	-5.6	.39	.31	85.0	84.5	-.0060	635282
26	13929	20805	-.8644A	.0161	1.00	.4	1.01	.6	.39	.40	72.4	72.0	-.0005	635288
27	15854	20828	-1.3992A	.0175	.87	-9.9	.76	-9.9	.48	.36	80.0	77.4	-.0024	635289
28	9200	20805	.2752A	.0154	.87	-9.9	.86	-9.9	.53	.42	74.7	68.7	.0005	635291
29	15382	20828	-1.2586A	.0171	.99	-1.4	.92	-5.2	.39	.37	75.2	75.9	-.0015	635294
30	17178	20805	-1.8516A	.0194	.92	-7.5	.86	-6.7	.39	.32	83.6	82.8	-.0047	635490
31	11040	20828	-.1572A	.0153	1.11	9.9	1.14	9.9	.32	.42	63.6	68.2	.0008	635492
32	14431	20805	-.9971A	.0164	.99	-.8	.98	-1.4	.39	.39	73.1	73.2	-.0006	635493
33	13222	20828	-.6820A	.0158	.93	-9.9	.90	-9.9	.47	.40	73.9	70.6	.0001	635495
34	10573	20805	-.0492A	.0153	.97	-5.9	.97	-4.2	.45	.42	70.2	68.1	.0007	635497
35	11833	20828	-.3446A	.0154	.94	-9.9	.94	-7.5	.47	.42	72.2	68.7	.0006	635498
36	16072	20805	-1.4715A	.0178	.86	-9.9	.75	-9.9	.49	.35	80.5	78.3	-.0029	635499
37	15671	20828	-1.3439A	.0174	.89	-9.9	.90	-6.8	.45	.36	80.3	76.8	-.0020	635501
38	15329	20828	-1.2431A	.0170	.92	-9.5	.85	-9.9	.45	.37	77.5	75.7	-.0016	635502
39	14123	20805	-.9152A	.0162	.89	-9.9	.82	-9.9	.50	.39	75.9	72.4	-.0005	635503
40	11326	20828	-.2245A	.0154	1.16	9.9	1.19	9.9	.28	.42	60.7	68.3	.0007	635504
41	13941	20805	-.8678A	.0161	1.17	9.9	1.30	9.9	.23	.40	67.0	72.0	-.0002	635516
42	11916	20828	-.3644A	.0155	1.05	7.8	1.03	3.7	.38	.42	66.0	68.8	.0006	635520
43	8298	20805	.4930A	.0156	.99	-1.6	1.06	6.3	.42	.42	72.2	69.7	.0002	635525
44	13832	20828	-.8363A	.0161	.95	-7.2	.92	-7.1	.44	.40	73.5	71.8	-.0004	635528
45	16967	20805	-1.7738A	.0191	.88	-9.9	.80	-9.9	.44	.33	83.0	81.8	-.0041	635532
46	15600	20828	-1.3227A	.0173	.98	-2.5	1.02	1.2	.38	.37	77.8	76.6	-.0018	635535
47	8568	20805	.4271A	.0156	1.02	3.0	1.05	5.1	.40	.42	69.5	69.4	.0004	635540
48	14645	20828	-1.0514A	.0165	.92	-9.9	.82	-9.9	.47	.38	75.3	73.7	-.0008	635544
49	15790	20805	-1.3844A	.0175	.92	-8.9	.89	-7.3	.43	.36	79.3	77.3	-.0020	635552
50	15876	20828	-1.4060A	.0176	.93	-7.6	.87	-8.5	.42	.36	78.8	77.5	-.0024	635555
51	12224	20805	-.4406A	.0155	1.02	4.1	.99	-.6	.40	.41	66.9	69.1	.0006	635557
52	12448	20805	-.4946A	.0156	.94	-9.9	.90	-9.9	.47	.41	71.4	69.4	.0004	635558
53	12586	20805	-.5281A	.0156	.89	-9.9	.85	-9.9	.51	.41	74.3	69.6	.0003	635565
54	14374	20805	-.9818A	.0164	.82	-9.9	.73	-9.9	.56	.39	78.6	73.1	-.0006	636026
55	9724	20828	.1525A	.0154	1.06	9.9	1.10	9.9	.36	.42	66.1	68.3	.0006	636030
56	15491	20805	-1.2946A	.0172	.87	-9.9	.81	-9.9	.48	.37	79.0	76.3	-.0017	636034
57	10278	20828	.0220A	.0153	1.11	9.9	1.15	9.9	.32	.42	63.3	68.1	.0007	636040
58	13492	20805	-.7527A	.0159	1.00	.6	.98	-1.8	.40	.40	70.4	71.1	.0000	636041
59	15417	20828	-1.2686A	.0171	.95	-5.8	.95	-3.6	.41	.37	78.3	76.0	-.0017	636044
60	15534	20828	-1.3031A	.0172	1.06	7.2	1.13	8.3	.30	.37	75.6	76.4	-.0018	636046
61	916	3638	1.3826	.0416	1.16	7.2	1.49	9.9	.20	.38	75.8	77.2	.0011	647160
62	1761	3606	.1146	.0368	1.05	3.4	1.06	3.3	.38	.42	66.1	68.1	.0007	647161
63	2394	6118	.3712	.0291	1.07	6.0	1.16	8.8	.35	.43	69.3	70.4	.0007	647162
64	1548	3725	.4595	.0366	1.07	4.6	1.10	4.7	.35	.42	66.3	69.0	.0008	647163
65	4620	6120	-1.5286	.0321	.88	-7.8	.79	-7.7	.48	.36	79.4	76.8	.0001	647164
66	1800	3813	.1951	.0358	.99	-1.0	1.01	.6	.43	.42	69.0	68.1	.0007	647165
67	2069	3694	-.2405	.0366	1.09	6.1	1.12	5.6	.34	.42	64.9	68.5	.0006	647167
68	2293	3572	-.6570	.0382	.95	-3.1	.92	-3.4	.45	.40	72.1	70.7	.0004	647169

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	Science
69	1606	3673	.3740	.0366	.97	-2.1	.96	-1.9	.44	.41	69.5	68.3	.0008	647170
70	2838	3671	-1.4017	.0425	.89	-5.4	.80	-5.4	.46	.35	81.0	78.5	.0003	647171
71	2161	3618	-.4288	.0372	.84	-9.9	.79	-9.9	.55	.41	75.8	69.1	.0005	647172
72	1362	3608	.6664	.0378	1.14	8.5	1.28	9.9	.27	.41	66.8	70.3	.0009	647173
73	570	3573	2.0558	.0492	1.05	1.6	1.41	6.9	.26	.35	85.2	84.8	.0011	647175
74	546	3714	2.1073	.0494	1.24	7.1	2.38	9.9	-.02	.32	85.2	85.7	.0010	647176
75	1581	3688	.4017	.0366	1.00	.1	1.02	1.2	.41	.41	69.2	68.4	.0008	647177
76	1243	3749	.9107	.0380	1.23	9.9	1.46	9.9	.16	.40	66.8	72.3	.0010	647178
77	1662	3568	.2081	.0370	.97	-1.9	.96	-1.9	.45	.42	69.5	68.1	.0007	647179
78	3040	6160	-.1555	.0283	1.02	1.4	1.00	.0	.42	.43	67.1	68.6	.0005	647180
79	1886	3658	-.0006	.0364	.97	-2.6	.96	-2.3	.45	.42	70.0	67.8	.0007	647181
80	2803	3755	-1.2623	.0406	.93	-3.6	.88	-3.5	.43	.37	78.6	76.5	.0003	647182
81	1553	3608	.3771	.0370	1.03	2.3	1.08	3.8	.38	.42	68.4	68.6	.0008	647184
82	2366	3764	-.5929	.0370	1.23	9.9	1.37	9.9	.17	.40	60.9	70.2	.0004	647185
83	1460	6135	1.2770	.0328	1.27	9.9	1.72	9.9	.11	.39	74.4	78.4	.0010	647187
84	959	3634	1.3142	.0408	1.37	9.9	1.72	9.9	-.01	.38	67.7	76.0	.0011	647189
85	1344	3779	.8002	.0373	1.16	9.6	1.25	9.9	.25	.41	65.3	71.0	.0010	647190
86	1726	3682	.2238	.0365	1.14	9.5	1.16	8.1	.30	.42	61.5	68.2	.0008	647191
87	2297	3630	-.6040	.0377	.90	-7.0	.86	-6.2	.50	.40	75.1	70.4	.0005	647192
88	2363	6203	.4345	.0290	1.13	9.9	1.21	9.9	.31	.43	66.3	70.8	.0008	647193
89	3240	3637	-2.4042	.0556	.86	-3.7	.61	-6.5	.41	.27	89.2	89.1	.0003	647194
90	1153	3683	1.0166	.0389	1.28	9.9	1.46	9.9	.13	.40	64.9	73.3	.0010	647195
91	2858	3686	-1.4191	.0425	.90	-4.9	.79	-5.5	.46	.35	80.3	78.6	.0002	647197
92	1572	3678	.4014	.0367	1.19	9.9	1.27	9.9	.23	.41	60.4	68.5	.0008	647198
93	2575	3596	-1.0642	.0402	.86	-8.2	.79	-7.0	.51	.38	78.9	74.5	.0003	647199
94	2239	6044	.4744	.0296	.83	-9.9	.85	-8.5	.56	.43	79.5	71.4	.0007	647200
95	774	3644	1.6294	.0438	1.27	9.9	1.71	9.9	.07	.37	76.1	80.1	.0011	647203
96	2477	3658	-.8292	.0385	1.22	9.9	1.44	9.9	.16	.39	66.2	72.2	.0004	647204
97	2837	3667	-1.4128	.0425	1.06	2.6	1.18	4.1	.28	.35	79.1	78.4	.0003	647205
98	929	3655	1.3631	.0414	1.11	5.1	1.45	9.9	.24	.39	76.8	77.1	.0011	647206
99	1961	6196	.7730	.0301	1.30	9.9	1.49	9.9	.13	.41	64.9	73.4	.0009	647208
100	770	3529	1.5834	.0440	1.27	9.9	1.80	9.9	.05	.36	76.5	79.5	.0011	647209
101	2252	6309	.5726	.0292	1.05	4.2	1.17	8.7	.37	.43	71.6	71.9	.0008	647210
102	1226	3741	.9021	.0381	1.25	9.9	1.48	9.9	.14	.40	66.1	72.3	.0010	647211
103	3040	3618	-1.8896	.0480	.96	-1.4	.87	-2.6	.35	.30	84.5	84.2	.0003	647212
104	2118	6154	.6237	.0297	1.15	9.9	1.23	9.9	.28	.42	67.5	72.2	.0008	647213
105	2057	3760	-.1764	.0361	1.08	5.9	1.09	4.7	.34	.41	64.0	68.0	.0006	647214
106	2802	3712	-1.2843	.0412	.85	-7.8	.75	-7.6	.51	.36	80.7	77.0	.0003	647215
107	2318	3634	-.6332	.0379	.87	-8.7	.82	-7.6	.52	.40	75.8	70.6	.0004	647216
108	2408	3612	-.7493	.0386	.92	-4.9	.84	-5.9	.47	.39	73.7	71.9	.0004	647217
109	1299	3657	.7660	.0378	1.39	9.9	1.63	9.9	.01	.40	58.6	70.9	.0009	647219
110	4866	6139	-1.7842	.0338	.87	-7.3	.72	-9.1	.47	.34	80.9	79.8	.0001	647221

Appendix V: Mathematics Pre- and Post-Equating Summary

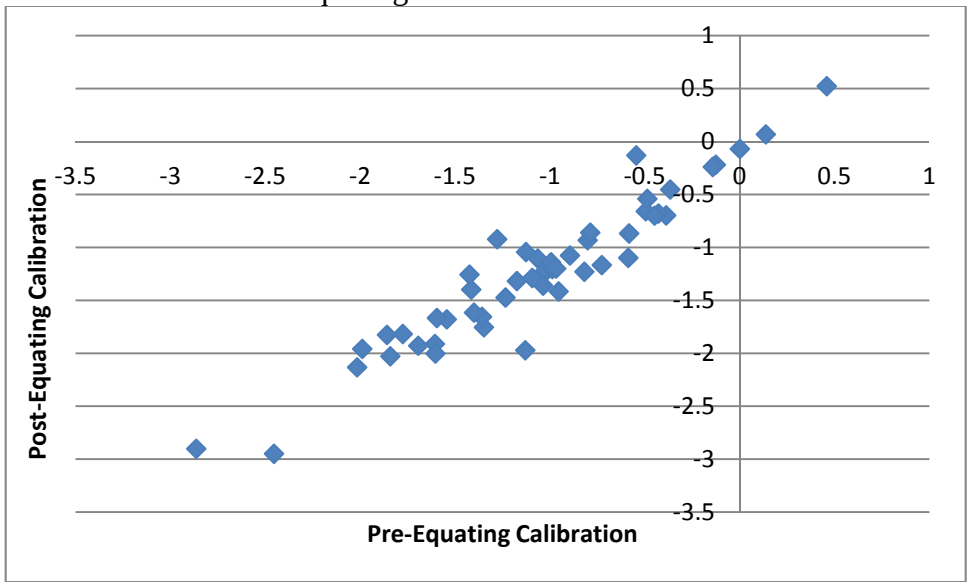
The Pre- values were taken from the calibrated item and used to create the Raw-to-Scale Conversion Tables. The Post- values were taken directly from unanchored calibration runs.

	3		4		5		6		7		8		11	
Item	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	-1.425	-1.257	-1.578	-1.819	-1.346	-1.576	-1.508	-0.933	-0.957	-1.141	-0.876	-0.952	-0.611	-0.566
2	-1.028	-1.238	-0.459	-0.973	-1.551	-1.546	-0.940	-1.263	0.557	0.410	-0.786	-0.950	-0.562	-0.629
3	-0.546	-0.131	-1.609	-1.573	-1.878	-2.206	-0.366	-0.383	-1.503	-1.593	0.009	0.086	-0.273	-0.396
4	-0.388	-0.698	-1.550	-1.551	-1.588	-1.850	0.667	-0.704	-2.198	-2.669	-0.944	-1.094	-0.620	-0.605
5	-1.606	-1.912	-1.346	-2.076	-0.951	-1.000	-0.728	-0.724	-1.667	-1.940	-1.573	-1.077	-0.301	-0.168
6	-1.130	-1.972	-1.967	-2.701	-1.666	-2.134	-1.520	-1.268	-0.620	-0.541	-1.306	-1.015	-0.437	-0.376
7	-1.064	-1.106	-0.217	-0.585	-0.771	-0.937	-1.333	-1.532	0.213	-0.037	-0.443	-0.556	-1.721	-1.763
8	-1.348	-1.755	0.066	-0.109	-1.053	-1.044	-0.551	-1.010	-0.480	-0.787	-1.286	-1.506	-0.942	-1.210
9	-1.127	-1.044	-0.828	-0.996	-0.780	-1.350	-1.400	-1.577	-0.438	-0.691	-1.144	-1.088	-0.426	-0.434
10	-0.429	-0.680	-1.542	-2.057	-1.861	-2.158	-1.743	-1.729	-1.482	-1.624	-0.724	-0.839	-1.189	-1.490
11	-2.016	-2.133	-1.383	-1.522	-0.918	-0.899	-0.526	-0.486	0.363	0.467	-0.291	-0.342	-1.009	-0.933
12	-2.864	-2.902	-0.729	-1.029	-1.711	-1.875	-0.918	-0.893	-0.301	-0.507	-0.457	-0.593	-1.193	-1.112
13	-0.367	-0.454	-0.556	-0.444	-1.122	-1.410	-2.126	-2.235	-1.135	-1.097	-0.799	-1.203	-1.455	-1.624
14	-1.026	-1.222	-1.374	-1.520	-0.448	-1.044	-1.437	-1.835	-1.256	-0.857	-0.625	-0.641	-0.894	-0.823
15	-0.126	-0.219	0.198	-0.002	-0.817	-1.327	-1.771	-1.196	-1.323	-1.556	-0.766	-0.568	-1.076	-1.137
16	-2.454	-2.949	-0.646	-0.746	-0.730	-1.645	-0.419	-0.527	-0.357	-0.493	-1.048	-1.139	-0.220	-0.005
17	-0.987	-1.205	-0.217	-0.607	0.017	-1.144	-0.925	-2.013	-0.463	-0.535	-1.732	-1.669	-0.440	-0.498
18	-0.496	-0.659	-0.968	-1.178	-0.365	-0.442	-0.763	-2.053	-0.826	-0.980	0.030	-0.201	-0.716	-0.948
19	-0.955	-1.416	-1.186	-1.367	-0.852	-0.924	-1.448	-1.656	-1.261	-1.634	-0.992	-1.001	-0.087	0.079
20	-1.234	-1.474	-0.055	-0.053	-0.530	-0.593	-1.335	-1.535	-0.434	-0.590	-0.701	-0.813	-0.550	-0.742
21	-1.859	-1.827	-0.866	-1.138	-0.867	-1.211	0.237	-0.135	-0.651	-0.491	-1.369	-1.541	-0.997	-1.058
22	-0.995	-1.141	-1.630	-1.956	-0.626	-0.534	-1.045	-1.010	-0.761	-0.827	-0.625	-0.728	-0.128	-0.209

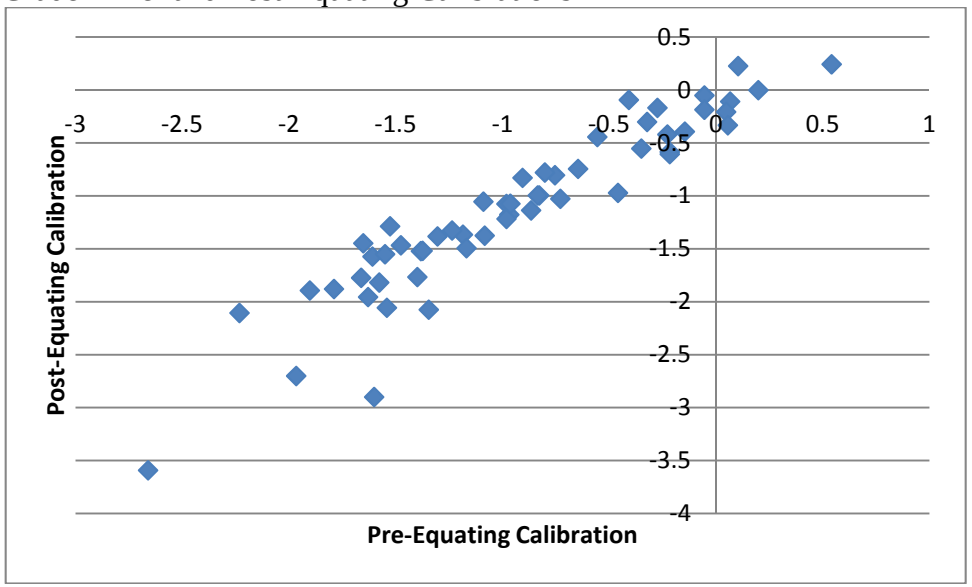
	3		4		5		6		7		8		11	
Item	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
23	-1.279	-0.922	-1.602	-2.900	-1.272	-1.494	-0.729	-1.042	-0.321	-0.541	-0.653	-0.653	-0.887	-0.618
24	-0.802	-0.932	-1.662	-1.774	-1.738	-1.750	-1.674	-1.750	-0.494	-0.627	-2.713	-2.381	-1.857	-1.958
25	-1.842	-2.029	-0.323	-0.302	-1.160	-1.761	-1.422	-1.583	-0.087	-0.367	-1.009	-1.021	-0.720	-0.817
26	-1.544	-1.679	-2.660	-3.593	-2.079	-2.547	-0.214	-0.408	-1.214	-1.375	-0.670	-0.474	-0.773	-0.792
27	-0.819	-1.230	-2.232	-2.106	0.239	-0.328	-1.196	-0.984	-1.563	-1.856	-1.124	-1.262	-0.605	-0.581
28	-1.415	-1.398	-1.527	-1.288	-0.486	-0.840	-2.144	-2.230	0.205	0.002	-1.469	-1.603	-0.558	-0.322
29	-0.727	-1.167	-0.982	-1.077	-2.173	-1.788	0.042	0.003	-1.529	-1.932	-0.437	-0.514	-0.691	-0.752
30	-1.036	-1.361	-0.228	-0.421	-0.279	-0.393	-2.190	-2.233	-0.720	-0.934	-1.359	-1.582	-0.805	-0.993
31	-1.989	-1.959	-0.275	-0.169	-0.247	-0.648	-1.144	-1.070	-0.643	-1.016	-0.720	-0.325	-0.529	-0.286
32	-0.788	-0.861	-1.236	-1.327	-1.642	-1.843	-0.865	-0.890	-0.741	-0.704	-0.245	-0.209	-0.440	-0.525
33	-1.359	-1.656	-0.409	-0.094	-0.671	-0.948	-1.513	-1.675	-0.927	-1.176	-1.006	-0.928	-1.041	-1.379
34	-1.401	-1.616	-0.146	-0.394	-1.133	-1.144	-1.793	-2.026	-0.659	-0.789	-1.270	-1.472	-0.745	-0.808
35	-0.588	-1.099	-0.982	-1.218	-0.855	-0.952	-0.598	-0.845	-2.284	-2.722	0.309	0.475	-0.509	-0.461
36	0.137	0.067	0.047	-0.207	0.243	0.330	-1.091	-1.896	-1.516	-1.839	-2.131	-2.118	-0.354	-0.608
37	-0.143	-0.240	0.055	-0.334	-0.720	-1.187	0.310	0.293	-0.822	-1.148	-0.145	-0.307	-1.257	-1.381
38	-0.895	-1.077	-0.963	-1.075	-1.845	-1.801	-0.295	-0.549	-1.866	-2.103	-1.191	-1.378	-0.309	-0.436
39	-0.487	-0.542	-0.906	-0.830	-0.486	-0.712	-0.229	-0.451	0.140	-0.022	-0.430	-0.635	-0.125	0.151
40	0.458	0.522	-1.653	-1.449	-0.491	-0.804	-1.627	-1.415	-1.220	-1.474	-1.556	-1.441	-0.629	-0.732
41	-1.596	-1.667	-1.305	-1.384	0.465	0.396	-2.089	-1.844	-0.786	-1.030	-2.007	-2.207	-0.856	-0.871
42	-0.968	-1.201	-0.350	-0.554	-0.498	-0.808	-2.073	-2.371	-2.332	-2.405	-0.564	-0.601	-0.540	-0.697
43	-0.583	-0.869	-1.090	-1.055	-1.802	-1.697	-1.801	-2.140	-1.351	-1.664	-1.704	-1.716	-1.225	-1.157
44	-1.175	-1.318	-0.835	-0.997	-1.527	-1.706	-1.564	-1.598	-0.102	-0.231	-0.217	-0.142	-0.534	-0.388
45	-1.604	-2.003	0.541	0.242	-0.710	-0.869	-1.020	-1.181	-0.648	-0.859	-0.492	-0.593	-0.429	-0.593
46	-0.449	-0.700	-0.754	-0.805	-1.375	-1.347	-1.360	-1.600	-0.252	-0.360	-0.420	-0.653	-0.518	-0.853
47	-1.776	-1.818	-0.802	-0.780	-0.880	-0.961	-0.140	-0.776	-0.647	-0.609	-0.815	-0.839	-0.498	-0.802
48	-1.694	-1.929	-0.055	-0.187	-0.426	-0.538	-0.902	-1.136	-0.808	-1.097	0.044	-0.594	-2.208	-2.302
49	-1.094	-1.289	-1.790	-1.880	-0.867	-1.038	-0.173	-0.386	0.099	-0.083	-0.765	-1.178	-0.104	-0.115
50	0.000	-0.071	-1.084	-1.376	-0.428	-0.466	-1.387	-1.806	-1.171	-1.250	-0.656	-0.999	-0.924	-0.915
51			-1.169	-1.494	-1.368	-1.483	-0.680	-0.874	-1.638	-2.080	-0.846	-0.953	-0.093	-0.382
52			-1.903	-1.894	-1.144	-1.138	-1.135	-1.383	-1.197	-1.650	-0.760	-0.994	-0.923	-0.547

	3		4		5		6		7		8		11	
Item	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
53			-1.399	-1.767	-1.378	-2.281	-0.437	-0.435	-2.360	-2.619	0.234	0.072	-2.087	-1.807
54			0.103	0.225	-1.437	-1.637	-0.433	-0.783	-0.706	-0.812	0.564	0.342	0.778	0.624
55			-1.476	-1.467	-0.525	-0.692	-1.032	-0.928	-0.904	-0.523	0.345	0.032	0.641	0.858
56							-0.905	-1.236	-1.104	-1.494	-0.468	-0.804	0.399	0.245
57							-2.186	-2.406	0.759	0.493	-0.055	-0.217	-1.800	-1.616
58							0.156	-0.130	-0.066	-0.661	-1.734	-1.091	-2.137	-2.198
59											-1.228	-1.284	-0.492	-0.323
60											0.280	0.132	0.393	0.418
Mean	-1.058	-1.229	-0.936	-1.122	-0.966	-1.195	-1.025	-1.215	-0.835	-1.022	-0.792	-0.859	-0.697	-0.723
Shift	0.170		0.186		0.229		0.190		0.186		0.067		0.025	
Corr	0.952		0.937		0.899		0.870		0.971		0.943		0.963	
S D	0.653	0.697	0.694	0.793	0.608	0.614	0.692	0.657	0.708	0.761	0.649	0.602	0.609	0.631
Ratio	0.937		0.874		0.990		1.054		0.929		1.078		0.965	

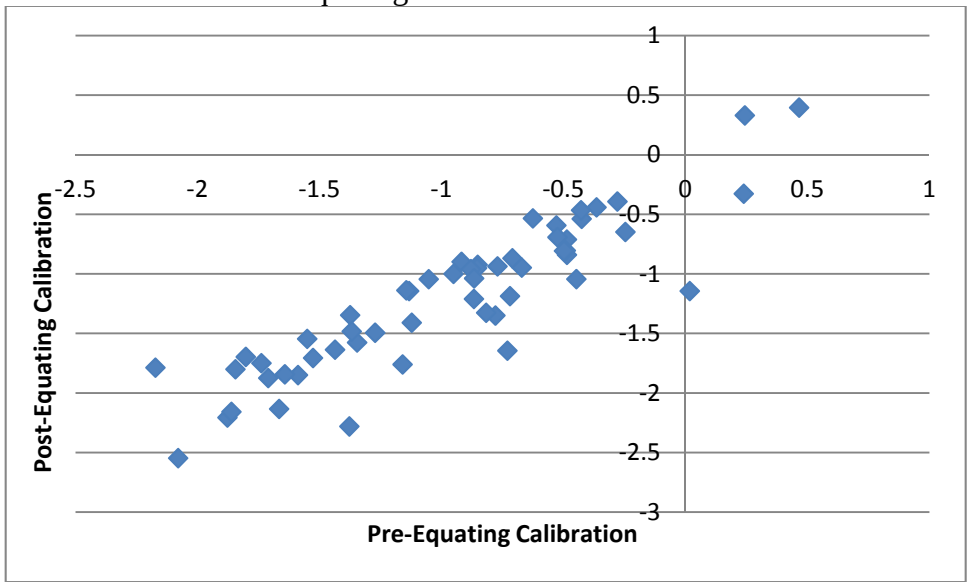
Grade 3 Pre- and Post-Equating Calibrations



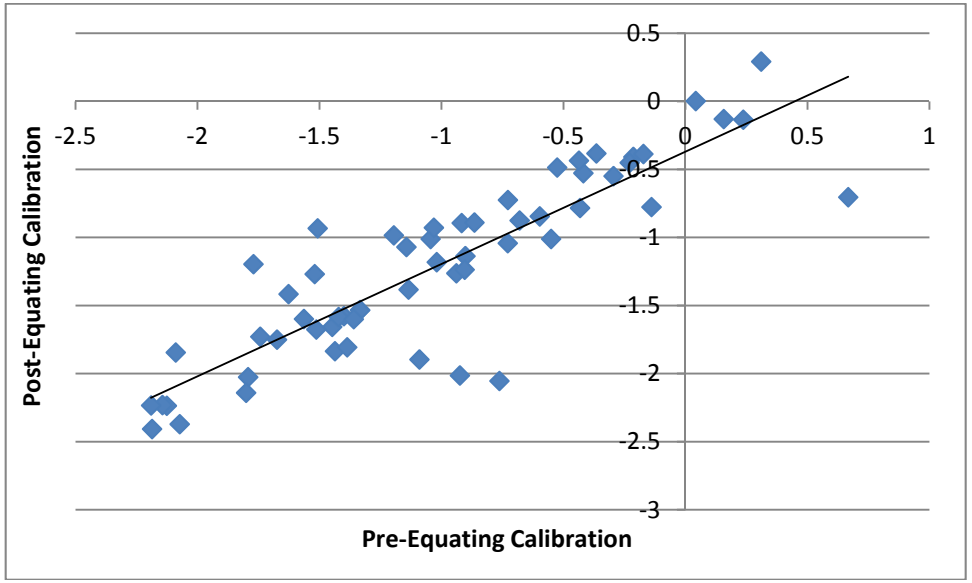
Grade 4 Pre- and Post-Equating Calibrations



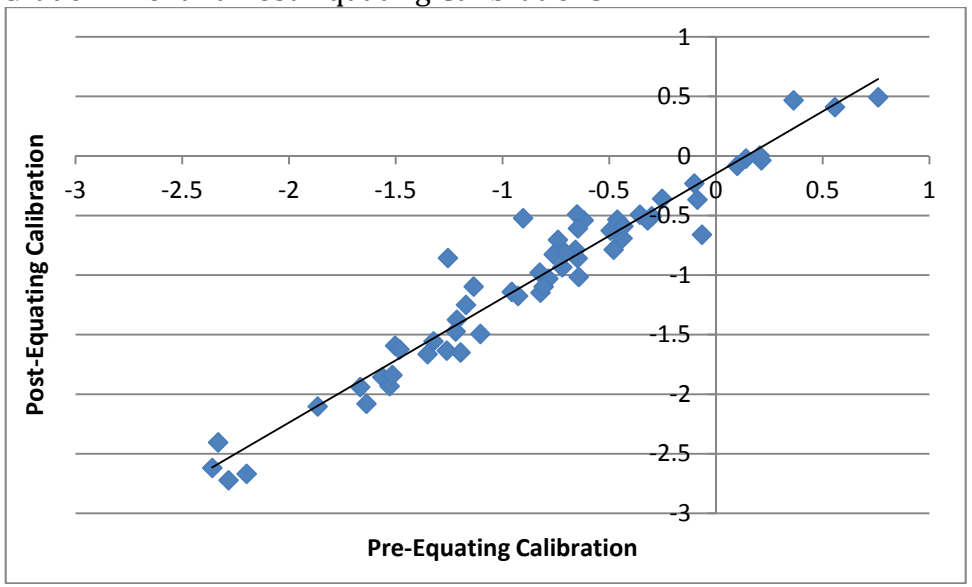
Grade 5 Pre- and Post-Equating Calibrations



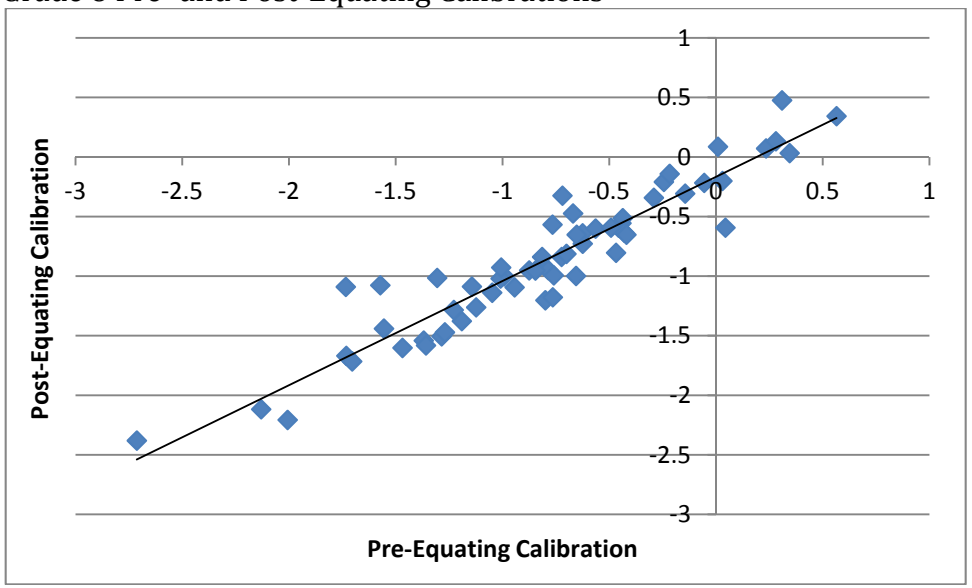
Grade 6 Pre- and Post-Equating Calibrations



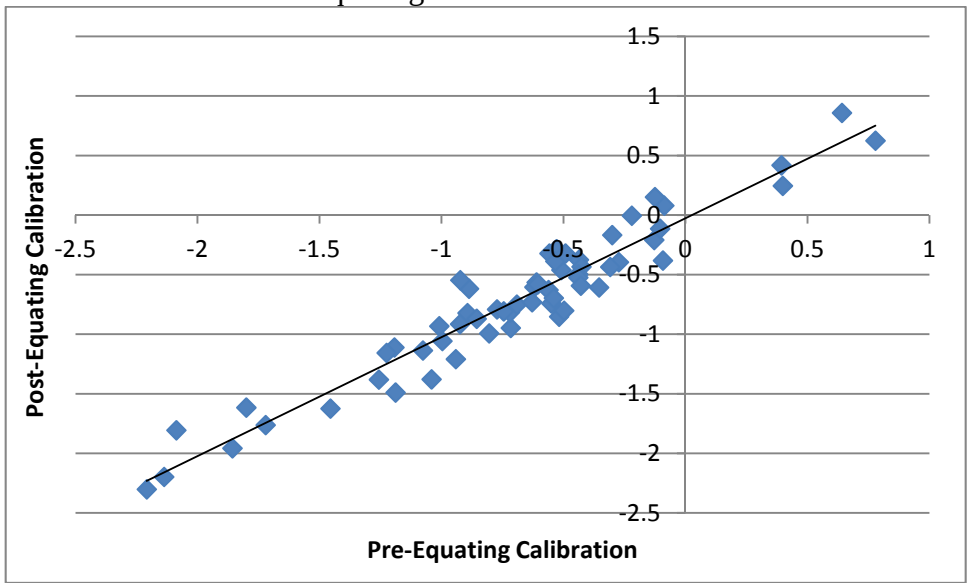
Grade 7 Pre- and Post-Equating Calibrations



Grade 8 Pre- and Post-Equating Calibrations



Grade 11 Pre- and Post-Equating Calibrations



Appendix W: Reading, Mathematics, and Science Analysis and Demographic Summary Sheets

***AM=American Indian, AS=Asian, BL=African American/Black, PI=Native Hawaiian or other Pacific Islander, WH=White, HI= Hispanic, MU=Multiple Ethnicities**

Reading : Grade 3

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		22157	31.5	8.1	0.88	0.88	108.7	30.9	23.3	54.4	22.3
Gender	Male	11419	31.0	8.3	0.89	0.89	107.0	31.0	25.1	54.3	20.6
	Female	10738	32.0	7.9	0.88	0.88	110.5	30.7	21.4	54.6	24.1
Ethnicity	AM	326	24.7	8.3	0.87	0.87	84.6	27.3	55.2	39.3	5.5
	AS	491	32.9	8.2	0.90	0.90	115.0	33.0	18.9	51.1	29.9
	BL	1454	26.7	8.4	0.88	0.88	90.9	27.9	43.9	48.6	7.4
	PI	18	29.4	7.9	0.86	0.86	99.6	26.8	38.9	55.6	5.6
	WH	15303	32.9	7.5	0.87	0.87	114.0	30.0	17.2	55.8	27.0
	HI	3839	28.1	8.1	0.87	0.87	95.7	27.8	37.3	52.8	9.9
	MU	726	31.4	8.3	0.89	0.89	108.9	32.3	24.8	53.7	21.5
Special Ed	No	18958	32.3	7.7	0.88	0.88	111.6	30.1	19.6	56.0	24.4
	Yes	3199	26.7	8.8	0.89	0.89	91.6	30.3	45.1	45.0	9.9
ELL	No	20230	32.1	7.9	0.88	0.88	110.8	30.7	20.8	55.1	24.1
	Yes	1927	25.5	7.4	0.83	0.83	86.8	24.1	49.5	47.0	3.5
FLS	No	11581	34.1	7.0	0.86	0.86	118.6	29.3	12.6	55.8	31.6
	Yes	10086	28.8	8.2	0.88	0.88	98.3	28.9	34.4	53.3	12.2

Grade 4

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		21975	29.8	8.0	0.87	0.87	111.7	36.3	22.5	49.9	27.5
Gender	Male	11124	29.4	8.2	0.88	0.88	109.9	36.9	24.5	49.2	26.3
	Female	10851	30.2	7.8	0.86	0.86	113.5	35.6	20.5	50.7	28.8
Ethnicity	AM	310	24.0	8.4	0.87	0.87	87.2	35.3	46.8	44.5	8.7
	AS	432	31.7	8.8	0.90	0.90	122.4	42.1	18.8	39.6	41.7
	BL	1383	25.3	8.0	0.86	0.86	91.7	33.0	41.2	48.9	9.9
	PI	26	30.0	5.8	0.74	0.73	110.9	26.7	7.7	65.4	26.9
	WH	15255	31.2	7.5	0.86	0.86	117.9	35.3	16.6	50.3	33.1
	HI	3867	26.2	7.7	0.85	0.85	95.6	32.2	37.5	50.3	12.3
	MU	702	29.0	8.0	0.86	0.87	108.0	35.4	23.8	51.7	24.5
Special Ed	No	18534	30.8	7.6	0.86	0.86	115.8	35.1	18.2	51.1	30.7
	Yes	3441	24.6	8.3	0.86	0.86	89.3	34.5	45.8	43.8	10.3
ELL	No	20142	30.3	7.9	0.87	0.87	114.1	36.1	20.1	50.3	29.6
	Yes	1833	23.7	6.9	0.80	0.79	85.0	27.1	49.4	46.0	4.6
FLS	No	11501	32.4	7.1	0.85	0.85	123.6	34.5	12.1	49.2	38.7
	Yes	9984	27.0	7.9	0.86	0.86	99.1	33.6	33.3	51.0	15.7

Grade 5

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		21635	32.6	8.7	0.89	0.89	114.3	41.5	24.2	41.9	33.9
Gender	Male	11015	31.9	8.8	0.89	0.89	111.1	41.7	27.1	41.3	31.6
	Female	10620	33.3	8.4	0.89	0.89	117.6	41.0	21.3	42.5	36.3
Ethnicity	AM	344	25.4	9.4	0.89	0.89	82.0	40.6	54.1	34.6	11.0
	AS	451	33.2	9.8	0.92	0.92	119.1	47.6	26.2	30.6	43.2
	BL	1451	27.4	9.2	0.89	0.89	90.7	40.5	46.4	37.1	16.5
	PI	27	30.9	9.0	0.89	0.89	105.5	41.0	33.3	44.4	22.2
	WH	15096	34.1	8.1	0.88	0.88	121.1	39.9	18.2	42.2	39.5
	HI	3635	29.2	8.5	0.87	0.87	98.0	38.0	36.9	44.5	18.6
	MU	631	32.5	8.7	0.89	0.89	113.9	41.7	25.7	40.7	33.6
Special Ed	No	18368	33.8	8.1	0.88	0.88	119.7	39.6	19.1	43.0	37.9
	Yes	3267	25.9	8.9	0.88	0.88	83.9	38.4	53.3	35.3	11.4
ELL	No	20193	33.1	8.5	0.89	0.89	116.5	41.2	22.2	41.9	35.9
	Yes	1442	25.7	7.4	0.82	0.82	82.4	30.7	52.8	41.3	6.0
FLS	No	11496	35.4	7.6	0.87	0.87	127.9	38.8	13.3	40.7	45.9
	Yes	9703	29.5	8.7	0.88	0.88	99.4	38.9	35.9	43.6	20.6

Grade 6

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		21391	33.0	8.5	0.89	0.89	112.7	40.3	25.1	44.5	30.4
Gender	Male	10951	32.5	8.7	0.89	0.89	110.5	40.9	27.4	43.9	28.7
	Female	10440	33.5	8.2	0.88	0.88	115.0	39.6	22.8	45.1	32.2
Ethnicity	AM	304	25.5	8.6	0.87	0.87	79.2	36.2	60.2	31.6	8.2
	AS	400	33.5	9.7	0.92	0.92	116.9	46.7	26.0	35.0	39.0
	BL	1435	27.9	8.6	0.87	0.87	89.2	36.5	46.9	41.5	11.6
	PI	23	29.2	7.5	0.84	0.84	93.0	30.1	43.5	52.2	4.3
	WH	15039	34.5	7.9	0.88	0.88	119.7	38.8	18.7	45.2	36.1
	HI	3535	29.3	8.5	0.88	0.88	95.0	37.2	40.4	44.6	15.0
	MU	655	32.8	8.4	0.89	0.89	111.7	39.7	26.1	45.0	28.9
Special Ed	No	18326	34.3	7.7	0.87	0.87	118.5	37.8	19.1	46.7	34.2
	Yes	3065	25.2	8.8	0.88	0.88	78.0	37.2	61.2	31.4	7.4
ELL	No	20359	33.4	8.3	0.89	0.89	114.6	39.8	23.1	45.0	31.8
	Yes	1032	24.5	7.5	0.82	0.82	74.7	29.7	64.2	33.4	2.3
FLS	No	11560	35.8	7.3	0.86	0.86	125.8	37.5	13.8	44.4	41.8
	Yes	9443	29.9	8.6	0.88	0.88	97.8	37.9	37.9	44.8	17.3

Grade 7

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		20977	32.5	8.7	0.89	0.89	116.1	40.5	22.3	43.9	33.7
Gender	Male	10738	31.9	9.0	0.90	0.90	113.6	41.3	24.8	43.0	32.2
	Female	10239	33.1	8.4	0.89	0.89	118.8	39.5	19.7	44.9	35.3
Ethnicity	AM	315	25.7	8.8	0.88	0.88	86.7	37.8	52.1	36.8	11.1
	AS	434	34.5	9.5	0.92	0.92	127.6	45.9	18.9	34.8	46.3
	BL	1301	26.4	8.8	0.88	0.88	88.9	37.3	47.8	39.7	12.5
	PI	27	29.1	9.6	0.90	0.90	101.1	42.9	29.6	48.1	22.2
	WH	14921	34.1	8.1	0.88	0.88	123.3	38.7	16.1	44.0	39.9
	HI	3340	28.3	8.5	0.87	0.87	96.8	37.0	37.3	47.0	15.7
	MU	639	31.9	8.6	0.89	0.89	113.1	39.6	24.6	44.8	30.7
Special Ed	No	18171	33.8	8.0	0.88	0.88	121.7	38.3	16.7	45.7	37.6
	Yes	2806	24.2	8.6	0.87	0.87	79.9	35.9	58.6	32.6	8.8
ELL	No	20218	32.8	8.6	0.89	0.89	117.7	40.1	20.8	44.2	34.9
	Yes	759	23.2	7.2	0.81	0.81	75.3	29.2	62.2	35.0	2.8
FLS	No	11578	35.3	7.5	0.87	0.87	129.2	37.4	11.9	42.5	45.5
	Yes	9021	29.1	8.7	0.88	0.88	100.6	38.3	34.6	46.0	19.4

Grade 8

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		20768	33.7	8.8	0.89	0.89	109.0	37.3	27.2	47.0	25.8
Gender	Male	10717	32.8	9.0	0.89	0.89	105.2	37.1	30.6	46.7	22.7
	Female	10051	34.6	8.6	0.88	0.88	113.0	36.9	23.6	47.4	29.0
Ethnicity	AM	267	27.7	9.5	0.89	0.89	84.8	35.5	52.8	39.3	7.9
	AS	382	34.6	10.0	0.92	0.92	114.0	42.5	25.4	39.5	35.1
	BL	1316	26.9	9.0	0.88	0.88	81.6	33.9	56.0	37.1	6.9
	PI	28	28.9	9.0	0.88	0.88	89.6	35.3	50.0	32.1	17.9
	WH	15029	35.4	8.1	0.87	0.87	115.9	35.5	20.1	49.1	30.9
	HI	3182	29.1	8.7	0.87	0.87	90.0	33.3	46.6	43.0	10.4
	MU	564	32.7	8.9	0.89	0.89	104.7	37.0	30.1	47.5	22.3
Special Ed	No	18017	35.1	8.1	0.87	0.87	114.4	35.0	21.1	49.9	29.0
	Yes	2751	24.7	8.4	0.85	0.85	73.4	31.5	67.6	28.1	4.3
ELL	No	20162	34.0	8.7	0.89	0.89	110.2	36.8	25.8	47.7	26.5
	Yes	606	23.3	7.4	0.81	0.81	68.1	26.4	75.4	23.6	1.0
FLS	No	11724	36.6	7.6	0.86	0.86	121.1	34.4	15.4	48.7	35.8
	Yes	8695	30.0	8.9	0.88	0.88	93.7	34.7	42.0	45.3	12.7

Grade 11

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		20868	32.6	9.8	0.91	0.91	102.2	44.9	35.3	39.5	25.2
Gender	Male	10683	31.9	10.0	0.91	0.91	98.8	45.3	38.2	38.8	23.0
	Female	10185	33.4	9.5	0.91	0.91	105.8	44.3	32.4	40.2	27.4
Ethnicity	AM	237	24.9	9.4	0.89	0.89	68.3	39.6	70.5	21.9	7.6
	AS	440	29.6	12.1	0.94	0.94	90.3	54.6	45.5	30.7	23.9
	BL	1317	25.6	9.8	0.90	0.90	71.1	41.0	65.7	25.9	8.4
	PI	17	31.0	10.3	0.91	0.91	95.9	47.7	41.2	35.3	23.5
	WH	15473	34.5	9.0	0.90	0.90	110.6	42.6	27.2	42.7	30.0
	HI	2826	27.2	9.5	0.89	0.89	77.7	40.4	59.0	31.4	9.6
	MU	558	30.6	9.9	0.91	0.91	93.0	43.8	44.8	37.6	17.6
Special Ed	No	18612	33.8	9.2	0.90	0.90	107.2	43.3	30.3	42.0	27.7
	Yes	2256	23.3	8.9	0.87	0.87	61.6	37.0	76.9	18.8	4.3
ELL	No	20362	33.0	9.6	0.91	0.91	103.8	44.2	33.9	40.3	25.8
	Yes	506	18.1	7.1	0.80	0.80	40.5	28.2	92.3	6.5	1.2
FLS	No	13085	35.3	8.7	0.89	0.89	114.3	42.1	24.0	42.9	33.1
	Yes	7430	28.3	9.8	0.90	0.90	82.8	42.2	53.5	34.3	12.2

Mathematics

Grade 3

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		22214	35.7	9.8	0.92	0.92	107.9	36.6	28.0	51.2	20.8
Gender	Male	11447	36.4	9.8	0.92	0.92	110.7	37.3	25.5	51.1	23.4
	Female	10767	35.0	9.8	0.91	0.92	105.0	35.6	30.6	51.4	18.0
Ethnicity	AM	325	27.1	10.7	0.92	0.92	78.7	33.8	62.2	31.1	6.8
	AS	510	37.9	9.8	0.93	0.93	118.3	40.0	22.7	43.9	33.3
	BL	1454	28.5	10.3	0.91	0.91	82.9	32.9	55.8	38.7	5.4
	PI	18	31.6	10.0	0.91	0.91	92.6	35.5	33.3	61.1	5.6
	WH	15311	37.6	8.8	0.91	0.91	114.9	35.1	20.4	54.4	25.2
	HI	3867	31.3	10.0	0.91	0.91	91.7	33.2	44.9	45.9	9.2
	MU	729	34.9	9.8	0.92	0.92	104.7	35.7	30.5	51.2	18.4
Special Ed	No	19010	36.6	9.3	0.91	0.91	111.2	35.7	24.4	53.1	22.6
	Yes	3204	30.1	10.9	0.92	0.92	88.8	36.5	49.5	40.2	10.3
ELL	No	20242	36.4	9.5	0.92	0.92	110.5	36.3	25.1	52.5	22.4
	Yes	1972	28.3	9.5	0.89	0.89	81.8	29.5	57.7	38.1	4.3
FLS	No	11585	38.9	8.2	0.89	0.90	120.0	34.6	16.1	54.3	29.7
	Yes	10105	32.3	10.1	0.91	0.91	95.3	34.2	40.3	48.4	11.3

Grade 4

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		22031	38.0	11.0	0.93	0.93	106.4	35.0	28.1	51.9	19.9
Gender	Male	11159	38.5	11.1	0.93	0.93	108.3	36.0	27.1	50.8	22.1
	Female	10872	37.5	10.8	0.92	0.92	104.5	33.9	29.2	53.1	17.7
Ethnicity	AM	311	28.8	12.2	0.93	0.93	80.1	33.5	59.8	33.4	6.8
	AS	450	40.9	12.1	0.95	0.95	119.0	42.6	21.8	42.2	36.0
	BL	1393	29.7	10.9	0.91	0.91	81.7	29.0	57.6	38.0	4.4
	PI	27	36.1	9.6	0.90	0.90	100.1	30.4	33.3	48.1	18.5
	WH	15252	40.2	10.0	0.92	0.92	113.0	33.9	20.4	55.1	24.4
	HI	3896	33.1	10.8	0.91	0.91	91.2	30.4	45.1	47.1	7.8
	MU	702	36.7	11.2	0.93	0.93	102.4	34.8	32.1	51.6	16.4
Special Ed	No	18591	39.2	10.4	0.92	0.92	109.9	34.3	24.0	53.9	22.0
	Yes	3440	31.7	11.5	0.92	0.92	87.8	33.0	50.3	41.2	8.5
ELL	No	20137	38.8	10.7	0.92	0.93	108.7	34.8	25.4	53.2	21.5
	Yes	1894	30.0	10.3	0.90	0.90	82.3	27.3	57.5	39.1	3.4
FLS	No	11504	41.7	9.6	0.91	0.91	118.1	33.9	15.9	55.0	29.1
	Yes	10012	34.2	10.9	0.92	0.92	94.2	31.6	40.8	49.2	10.1

Grade 5

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		21687	39.2	10.4	0.92	0.92	108.5	34.4	25.1	53.8	21.1
Gender	Male	11047	39.3	10.6	0.92	0.92	108.8	35.2	25.2	52.8	21.9
	Female	10640	39.2	10.2	0.91	0.91	108.1	33.6	24.9	54.8	20.3
Ethnicity	AM	346	28.8	12.2	0.93	0.93	78.1	34.5	62.7	31.2	6.1
	AS	473	40.5	11.9	0.94	0.95	115.6	41.7	23.0	43.6	33.4
	BL	1452	31.2	11.4	0.92	0.92	84.1	32.0	53.6	39.7	6.7
	PI	27	37.4	8.7	0.87	0.87	99.6	24.6	18.5	74.1	7.4
	WH	15095	41.2	9.3	0.90	0.91	114.6	32.8	18.0	56.9	25.1
	HI	3659	35.3	10.5	0.91	0.91	95.5	31.3	39.5	49.8	10.7
	MU	635	38.3	10.5	0.92	0.92	105.7	34.4	26.9	54.2	18.9
Special Ed	No	18416	40.6	9.7	0.91	0.91	112.5	33.3	20.3	56.1	23.6
	Yes	3271	31.7	11.1	0.91	0.91	85.7	31.6	52.1	40.6	7.3
ELL	No	20193	39.8	10.2	0.92	0.92	110.2	34.2	23.0	54.5	22.4
	Yes	1494	31.6	10.0	0.89	0.89	84.4	27.3	52.5	43.6	3.9
FLS	No	11498	42.6	8.7	0.89	0.90	119.3	32.5	13.8	56.5	29.7
	Yes	9726	35.7	10.8	0.91	0.92	96.7	32.3	37.1	51.2	11.7

Grade 6

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		21430	41.2	11.6	0.93	0.93	106.3	40.2	32.4	44.9	22.7
Gender	Male	10974	41.0	11.9	0.94	0.94	106.0	40.9	33.2	43.8	23.1
	Female	10456	41.3	11.4	0.93	0.93	106.5	39.4	31.5	46.1	22.4
Ethnicity	AM	303	30.6	12.3	0.93	0.93	73.6	34.9	67.3	27.7	5.0
	AS	418	44.1	12.4	0.95	0.95	120.4	47.1	25.6	35.4	39.0
	BL	1436	32.1	11.9	0.92	0.92	77.5	33.9	62.0	32.5	5.6
	PI	23	35.1	11.0	0.91	0.91	84.1	29.3	43.5	52.2	4.3
	WH	15033	43.3	10.7	0.92	0.93	113.0	39.0	25.2	47.6	27.2
	HI	3560	36.9	11.6	0.92	0.92	91.5	36.1	47.4	41.1	11.5
	MU	657	39.8	11.8	0.93	0.93	101.7	39.6	37.4	44.9	17.7
Special Ed	No	18369	42.8	10.7	0.92	0.92	111.3	38.8	26.7	47.8	25.5
	Yes	3061	31.5	12.0	0.92	0.92	76.2	35.0	66.2	27.4	6.3
ELL	No	20348	41.7	11.5	0.93	0.93	107.9	40.0	30.6	45.7	23.7
	Yes	1082	31.9	10.9	0.90	0.90	76.3	30.3	65.5	30.4	4.1
FLS	No	11554	44.7	10.1	0.92	0.92	118.1	38.5	20.8	48.0	31.2
	Yes	9465	37.3	11.9	0.93	0.93	93.1	37.5	45.1	41.9	13.1

Grade 7

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		20995	39.1	12.2	0.94	0.94	104.0	39.0	32.3	46.0	21.7
Gender	Male	10757	39.1	12.5	0.94	0.94	104.5	40.2	32.3	44.9	22.7
	Female	10238	39.1	11.9	0.93	0.93	103.6	37.7	32.3	47.0	20.6
Ethnicity	AM	311	27.4	12.4	0.93	0.93	70.6	33.9	70.7	24.1	5.1
	AS	444	43.6	12.4	0.95	0.95	122.1	44.8	22.7	35.1	42.1
	BL	1306	28.4	11.7	0.92	0.92	72.8	31.8	66.3	29.9	3.8
	PI	27	39.5	12.2	0.94	0.94	103.8	35.6	29.6	44.4	25.9
	WH	14906	41.5	11.2	0.93	0.93	111.1	37.5	24.5	49.4	26.0
	HI	3363	33.4	12.0	0.92	0.93	86.5	34.2	50.4	40.0	9.6
	MU	638	37.5	12.0	0.93	0.93	98.5	36.3	36.8	48.0	15.2
Special Ed	No	18196	40.8	11.4	0.93	0.93	108.9	37.7	26.8	48.9	24.4
	Yes	2799	28.1	11.7	0.92	0.92	72.2	31.7	68.5	27.1	4.4
ELL	No	20195	39.5	12.1	0.94	0.94	105.3	38.8	30.8	46.7	22.5
	Yes	800	28.2	10.6	0.90	0.90	72.2	28.4	70.5	26.5	3.0
FLS	No	11571	43.2	10.5	0.92	0.92	116.8	37.2	19.0	50.2	30.8
	Yes	9038	34.2	12.2	0.93	0.93	88.8	35.1	48.1	41.1	10.8

Grade 8

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		20800	39.1	12.7	0.94	0.94	99.3	37.6	38.3	44.2	17.5
Gender	Male	10734	39.0	13.0	0.94	0.94	99.3	38.5	38.9	42.9	18.2
	Female	10066	39.3	12.4	0.93	0.93	99.4	36.5	37.6	45.7	16.8
Ethnicity	AM	265	29.5	12.7	0.93	0.93	73.2	31.9	69.4	25.7	4.9
	AS	392	41.7	14.4	0.96	0.96	110.5	46.3	31.6	36.5	31.9
	BL	1315	27.9	11.5	0.91	0.91	69.1	29.2	73.8	22.9	3.3
	PI	28	33.6	11.5	0.91	0.91	83.0	29.9	60.7	32.1	7.1
	WH	15024	41.7	11.8	0.93	0.93	106.3	36.4	29.8	49.1	21.2
	HI	3215	32.9	12.1	0.92	0.92	81.5	31.8	59.7	33.8	6.5
	MU	561	36.2	12.9	0.93	0.93	91.0	36.5	48.8	38.7	12.5
Special Ed	No	18053	40.9	12.0	0.93	0.93	104.1	36.5	32.6	47.6	19.8
	Yes	2747	27.5	11.3	0.90	0.90	68.1	28.5	75.4	21.8	2.8
ELL	No	20149	39.5	12.6	0.93	0.94	100.4	37.4	37.0	45.0	18.0
	Yes	651	27.4	10.5	0.88	0.89	67.4	25.9	78.0	20.3	1.7
FLS	No	11723	43.3	11.2	0.92	0.92	111.3	36.1	24.6	50.4	25.0
	Yes	8710	33.9	12.5	0.93	0.93	84.4	33.6	55.4	36.5	8.0

Grade 11

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		20838	37.4	13.1	0.94	0.94	95.9	44.8	44.3	34.7	21.0
Gender	Male	10669	37.5	13.4	0.94	0.94	96.7	46.2	44.4	33.0	22.7
	Female	10169	37.3	12.8	0.93	0.93	95.1	43.2	44.2	36.5	19.3
Ethnicity	AM	237	27.0	11.0	0.90	0.90	62.6	33.4	76.8	20.3	3.0
	AS	440	38.5	14.3	0.95	0.95	101.7	51.0	41.8	28.9	29.3
	BL	1316	26.6	11.6	0.91	0.91	61.5	35.3	77.4	17.9	4.8
	PI	18	35.8	12.5	0.93	0.93	88.3	37.9	55.6	33.3	11.1
	WH	15446	40.0	12.4	0.93	0.93	104.2	43.5	36.0	38.5	25.5
	HI	2832	29.8	11.7	0.91	0.91	71.1	36.2	69.5	24.4	6.2
	MU	549	33.7	12.9	0.93	0.93	83.5	42.0	56.3	31.5	12.2
Special Ed	No	18608	38.9	12.7	0.93	0.94	100.5	43.9	39.6	37.2	23.2
	Yes	2230	25.5	10.5	0.89	0.89	58.1	31.9	83.1	13.5	3.3
ELL	No	20321	37.8	13.0	0.94	0.94	97.0	44.6	43.2	35.3	21.5
	Yes	517	24.2	9.9	0.87	0.88	54.5	30.2	86.7	10.3	3.1
FLS	No	13071	41.1	12.1	0.93	0.93	107.9	43.5	32.5	39.6	28.0
	Yes	7394	31.6	12.5	0.92	0.92	76.6	39.5	63.3	27.0	9.7

Science
Grade 5

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		21686	34.0	8.7	0.88	0.89	101.0	33.8	33.6	52.0	14.4
Gender	Male	11047	34.5	8.7	0.89	0.89	103.2	34.3	31.2	52.5	16.3
	Female	10639	33.4	8.6	0.88	0.88	98.6	33.1	36.1	51.5	12.5
Ethnicity	AM	345	27.3	9.3	0.88	0.89	77.3	32.4	62.0	30.7	7.2
	AS	471	32.5	10.6	0.92	0.92	96.8	41.2	40.1	43.3	16.6
	BL	1449	26.6	8.4	0.85	0.86	74.2	28.6	68.9	28.8	2.3
	PI	27	31.6	8.8	0.88	0.88	94.3	38.6	44.4	48.1	7.4
	WH	15101	36.1	7.7	0.86	0.87	108.8	31.9	23.5	58.1	18.4
	HI	3658	29.2	8.1	0.85	0.85	82.9	28.3	56.9	39.0	4.1
	MU	635	32.8	8.5	0.88	0.88	96.4	33.2	38.0	51.7	10.4
Special Ed	No	18411	34.9	8.3	0.88	0.88	104.2	33.1	29.4	54.6	15.9
	Yes	3275	29.0	9.0	0.88	0.88	82.7	31.9	56.9	37.0	6.0
ELL	No	20189	34.6	8.4	0.88	0.88	103.4	33.2	30.3	54.2	15.5
	Yes	1497	24.9	7.1	0.79	0.79	68.3	23.2	78.0	21.3	0.7
FLS	No	11510	37.1	7.4	0.85	0.86	112.7	31.6	19.3	59.4	21.2
	Yes	9752	30.5	8.6	0.87	0.87	87.9	31.0	49.3	43.9	6.8

Grade 8

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		20808	39.7	10.4	0.90	0.90	99.8	33.6	32.4	52.1	15.4
Gender	Male	10737	40.5	10.6	0.91	0.91	102.7	34.9	29.9	51.7	18.4
	Female	10071	38.9	10.1	0.89	0.89	96.7	31.8	35.2	52.6	12.2
Ethnicity	AM	269	33.0	11.0	0.90	0.90	79.2	32.2	61.0	33.8	5.2
	AS	392	39.8	12.0	0.93	0.93	101.2	38.8	33.4	45.9	20.7
	BL	1317	30.0	10.0	0.88	0.88	70.4	28.6	69.9	27.9	2.2
	PI	28	33.5	9.6	0.87	0.87	81.5	32.6	64.3	32.1	3.6
	WH	15030	42.1	9.3	0.88	0.89	107.1	31.7	23.1	57.4	19.5
	HI	3211	33.6	9.7	0.87	0.87	80.4	28.1	56.6	40.2	3.3
	MU	561	37.6	10.4	0.90	0.90	93.1	32.8	40.3	49.6	10.2
Special Ed	No	18057	41.0	9.7	0.89	0.89	103.7	32.3	27.4	55.3	17.3
	Yes	2751	31.2	10.4	0.89	0.89	74.0	30.3	65.4	31.2	3.5
ELL	No	20157	40.1	10.2	0.90	0.90	101.0	33.2	30.7	53.4	15.9
	Yes	651	27.0	7.9	0.80	0.80	62.0	22.1	85.6	14.0	0.5
FLS	No	11734	43.2	8.9	0.88	0.88	110.9	31.1	19.1	58.7	22.3
	Yes	8728	35.3	10.3	0.89	0.89	85.8	31.1	49.3	44.0	6.7

Grade 11

Group	Subgroup	Valid N	Raw Scores		Alpha	Stratified Alpha	Scale Scores		Percent in Performance Level		
			Mean	SD			Mean	SD	Below	Meets	Exceeds
Overall		20830	37.8	11.8	0.92	0.92	99.2	29.3	33.0	53.9	13.1
Gender	Male	10667	38.6	12.2	0.93	0.93	101.6	31.1	31.0	52.9	16.1
	Female	10163	36.9	11.2	0.91	0.91	96.6	27.0	35.1	55.0	9.9
Ethnicity	AM	239	28.8	10.6	0.89	0.89	78.2	24.4	67.8	28.0	4.2
	AS	438	34.7	14.1	0.95	0.95	93.0	35.2	42.2	42.9	14.8
	BL	1310	27.9	10.9	0.90	0.90	75.9	24.4	68.3	29.2	2.4
	PI	18	36.0	12.1	0.92	0.92	95.6	29.7	50.0	38.9	11.1
	WH	15439	40.3	10.8	0.91	0.91	105.1	27.9	23.9	60.0	16.1
	HI	2830	30.4	10.6	0.89	0.89	81.6	23.9	59.4	37.7	2.9
	MU	556	34.7	12.1	0.92	0.92	91.8	29.1	43.9	46.4	9.7
Special Ed	No	18589	39.0	11.3	0.91	0.91	102.0	28.6	28.5	57.2	14.3
	Yes	2241	27.6	10.6	0.89	0.89	75.4	24.1	70.4	26.9	2.7
ELL	No	20316	38.2	11.6	0.92	0.92	100.1	28.9	31.6	55.0	13.4
	Yes	514	21.9	7.8	0.79	0.80	62.8	17.1	89.7	10.3	0.0
FLS	No	13062	41.1	10.6	0.91	0.91	107.1	27.8	21.4	61.0	17.7
	Yes	7411	32.5	11.5	0.91	0.91	86.3	26.7	51.7	42.8	5.5