

Nebraska State Accountability - 2018 Math Table of Specifications

MA 3.1 NUMBER: Students will communicate number sense concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.		Grade 3 Math Number				
MA 3.1.1	Numeric Relationships: Students will demonstrate, represent, and show relationships among whole numbers and simple fractions within the base-ten number system.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.1.1.a	Read, write and demonstrate multiple equivalent representations for numbers up to 100,000 using objects, visual representations, including standard form, word form, expanded form, and expanded notation.	2	0 - 2	0 - 2		2 - 3
MA 3.1.1.b	Compare whole numbers through the hundred thousands and represent the comparisons using the symbols $>$, $<$ or $=$.	1	2 - 4			1 - 2
MA 3.1.1.c	Round a whole number to the tens or hundreds place, using place value understanding or a visual representation.	2	0 - 2	0 - 2		1 - 2
MA 3.1.1.d	Represent and understand a fraction as a number on a number line.	2		2 - 3		2 - 3
MA 3.1.1.e	Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.	2	0 - 2	0 - 2		1 - 2
MA 3.1.1.f	Show and identify equivalent fractions using visual representations including pictures, manipulatives, and number lines.	2	0 - 2	0 - 2		1 - 2
MA 3.1.1.g	Find parts of a whole and parts of a set using visual representations.	2	0 - 2	0 - 2		1 - 2
MA 3.1.1.h	Explain and demonstrate how fractions $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and a whole relate to time, measurement, and money, and demonstrate using visual representation.	2	0 - 2	0 - 2		1 - 2
MA 3.1.1.i	Compare and order fractions having the same numerators or denominators using visual representations, comparison symbols, and verbal reasoning.	2	1 - 2	1 - 2		1 - 2

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MA 3.1.2	Operations: Students will demonstrate the meaning of multiplication and division with whole numbers and compute accurately.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.1.2.a	Add and subtract within 1,000 with or without regrouping.	1	1 - 2			1 - 2
MA 3.1.2.b	Select and apply the appropriate methods of computation when solving one- and two- step addition and subtraction problems with four-digit whole numbers through the thousands (e.g., visual representations, mental computation, paper-pencil).	Assessed at the local level				
MA 3.1.2.c	Use drawings, words, arrays, symbols, repeated addition, equal groups, and number lines to explain the meaning of multiplication.	2	0 - 2	0 - 2		1 - 2
MA 3.1.2.d	Use words and symbols to explain the meaning of the Zero Property and Identity Property of multiplication.	Assessed at the local level				
MA 3.1.2.e	Multiply one digit whole numbers by multiples of 10 in the range of 10 to 90.	1	1 - 2			1 - 2
MA 3.1.2.f	Use objects, drawings, arrays, words and symbols to explain the relationship between multiplication and division (e.g., if $3 \times 4 = 12$ then $12 \div 3 = 4$).	2	0 - 2	0 - 2		1 - 2
MA 3.1.2.g	Fluently (i.e. automatic recall based on understanding) multiply and divide within 100.	Assessed at the local level				
MA 3.1.2.h	Determine the reasonableness of whole number sums and differences in real-world problems using estimation, compatible numbers, mental computations, or other strategies.	Assessed at the local level				
Grade 3 Number Total		2	8 - 16	8 - 16		19 - 22

MA 3.2	ALGEBRA: Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 3 Math Algebra				
MA 3.2.1	Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions and equations.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.2.1.a	Identify arithmetic patterns (including patterns in the addition or multiplication tables) using properties of operations.	2	0 - 2	0 - 2		1 - 2
MA 3.2.1.b	Interpret a multiplication equation as equal groups (e.g., interpret 4×6 as the total number of objects in four groups of six objects each). Represent verbal statements of equal groups as multiplication equations.	2	0 - 2	0 - 2		1 - 2
MA 3.2.2	Algebraic Processes: Student will apply the operational properties when multiplying and dividing.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.2.2.a	Apply the commutative, associative, and distributive properties as strategies to multiply and divide.	Assessed at the local level				
MA 3.2.2.b	Solve one-step whole number equations involving addition, subtraction, multiplication, or division, including the use of a letter to represent the unknown quantity.	2	1 - 2	2 - 4		3 - 5
MA 3.2.3	Applications: Students will solve real-world problems involving equations with whole numbers.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.2.3.a	Solve real-world problems involving two-step equations (involving two operations) involving whole numbers using addition and subtraction.	2		0 - 2		1 - 2
MA 3.2.3.b	Write an equation (e.g., one operation, one variable) to represent real-world problems involving whole numbers.	2		0 - 2		1 - 2
Grade 3 Algebra Total		2	3 - 6	3 - 6		8 - 10

MA 3.3	GEOMETRY: Students will communicate geometric concepts and measurement concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 3 Math Geometry				
MA 3.3.1	Characteristics: Students will identify and describe geometric characteristics and create two- and three-dimensional shapes.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.3.1.a	Identify the number of sides, angles, and vertices of two-dimensional shapes.	1	0 - 2			1 - 2
MA 3.3.1.b	Sort quadrilaterals into categories (e.g., rhombuses, squares, and rectangles).	2	0 - 2	0 - 2		1 - 2
MA 3.3.1.c	Draw lines to separate two-dimensional figures into equal areas, and express the area of each part as a unit fraction of the whole.	2	0 - 2	0 - 2		1 - 2
MA 3.3.2	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	Assessed at the local level				
MA 3.3.3	Measurement: Students will perform and compare measurements and apply formulas.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.3.3.a	Find the perimeter of polygons given the side lengths, and find an unknown side length.	2	0 - 2	0 - 2		1 - 2
MA 3.3.3.b	Tell and write time to the minute using both analog and digital clocks.	1	1 - 2			1 - 2
MA 3.3.3.c	Solve real-world problems involving addition and subtraction of time intervals and find elapsed time.	2	0 - 2	0 - 2		1 - 2
MA 3.3.3.d	Identify and use the appropriate tools and units of measurement, both customary and metric, to solve real-world problems involving length, weight, mass, liquid volume, and capacity (within the same system and unit).	Assessed at the local level				
MA 3.3.3.e	Estimate and measure length to the nearest half inch, quarter inch, and centimeter.	1	1 - 2			1 - 2
MA 3.3.3.f	Use concrete and pictorial models to measure areas in square units by counting square units.	Assessed at the local level				
MA 3.3.3.g	Find the area of a rectangle with whole-number side lengths by modeling with unit squares, and show that the area is the same as would be found by multiplying the side lengths.	2	0 - 2	0 - 2		1 - 2

MA 3.3.3.h	Identify and draw rectangles with the same perimeter and different areas or with the same area and different perimeters.	3		0 - 2	0 - 2	1 - 2
Grade 3 Geometry Total		3	3 - 8	6 - 8	0 - 2	

MA 3.4	DATA: Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 3 Math Data				
MA 3.4.1	Representations: Students will create displays that represent data.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.4.1.a	Create scaled pictographs and scaled bar graphs to represent a data set—including data collected through observations, surveys, and experiments—with several categories.	3		2 - 4	0 - 2	4 - 5
MA 3.4.1.b	Represent data using line plots where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	2		2 - 3		2 - 3
MA 3.4.2	Analysis & Applications: Students will analyze data to address the situation.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 3.4.2.a	Solve problems and make simple statements about quantity differences (e.g., how many more and how many less) using information represented in pictographs and bar graphs.	2		2 - 3		2 - 3
MA 3.4.3	Probability: Students will interpret and apply concepts of probability.	<i>No additional indicator(s) at this level.</i>				
Grade 3 Data Total		3		6 - 8	0 - 2	8 - 10

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MA 4.1	NUMBER: Students will communicate number sense concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 4 Math Number				
MA 4.1.1	Numeric Relationships: Students will demonstrate, represent, and show relationships among fractions and decimals within the base-ten number system.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 4.1.1.a	Read, write, and demonstrate multiple equivalent representations for whole numbers up to one million and decimals to the hundredths, using objects, visual representations, standard form, word form, and expanded notation.	2	0 - 2	0 - 2		1 - 2
MA 4.1.1.b	Recognize a digit in one place represents ten times what it represents in the place to its right and 1/10 what it represents in the place to its left.	Assessed at the local level				
MA 4.1.1.c	Classify a number up to 100 as prime or composite.	1	1 - 2			1 - 2
MA 4.1.1.d	Determine whether a given whole number up to 100 is a multiple of a given one-digit number.	1	1 - 2			1 - 2
MA 4.1.1.e	Determine factors of any whole number up to 100.	1	1 - 2			1 - 2
MA 4.1.1.f	Compare whole numbers up to one million and decimals through the hundredths place using $>$, $<$, and $=$ symbols, and visual representations.	1	2 - 4			2 - 4
MA 4.1.1.g	Round a multi-digit whole number to any given place.	1	1 - 2			1 - 2
MA 4.1.1.h	Use decimal notation for fractions with denominators of 10 or 100.	1	2 - 4			2 - 4
MA 4.1.1.i	Generate and explain equivalent fractions by multiplying by an equivalent fraction of 1.	Assessed at the local level				
MA 4.1.1.j	Explain how to change a mixed number to a fraction and how to change a fraction to a mixed number.	Assessed at the local level				

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MA 4.1.1.k	Compare and order fractions having unlike numerators and unlike denominators using visual representations (number line), comparison symbols and verbal reasoning (e.g., using benchmarks or common numerators or common denominators).	2		1 - 2		1 - 2
MA 4.1.1.l	Decompose a fraction into a sum of fractions with the same denominator in more than one way and record each decomposition with an equation and a visual representation.	Assessed at the local level				
MA 4.1.2	Operations: Students will demonstrate the meaning of addition and subtraction of whole numbers and fractions and compute accurately.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 4.1.2.a	Add and subtract multi-digit numbers using the standard algorithm.	Assessed at the local level				
MA 4.1.2.b	Multiply a four-digit whole number by a one-digit whole number.	1	2 - 4			2 - 4
MA 4.1.2.c	Multiply a two-digit whole number by a two-digit whole number using the standard algorithm.	2	1 - 2			1 - 2
MA 4.1.2.d	Divide up to a four-digit whole number by a one-digit divisor with and without a remainder.	1	2 - 4			2 - 4
MA 4.1.2.e	Use drawings, words, and symbols to explain the meaning of addition and subtraction of fractions with like denominators.	Assessed at the local level				
MA 4.1.2.f	Add and subtract fractions and mixed numbers with like denominators.	1	2 - 4			2 - 4
MA 4.1.2.g	Multiply a fraction by a whole number.	2	1 - 2			1 - 2
MA 4.1.2.h	Determine the reasonableness of whole number products and quotients in real-world problems using estimation, compatible numbers, mental computations, or other strategies.	Assessed at the local level				
Grade 4 Number Total		2	15 - 19	5 - 8		21 - 24

MA 4.2	ALGEBRA: Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 4 Math Algebra				
MA 4.2.1	Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions and equations.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 4.2.1.a	Create a simple algebraic expression or equation using a variable for an unknown number to represent a math process (e.g., $3 + n = 15$, $81 \div n = 9$).	3		0 - 2	0 - 2	1 - 2
MA 4.2.1.b	Generate and analyze a number or shape pattern to follow a given rule, such as $y = 3x + 5$ is a rule to describe a relationship between two variables and can be used to find a second number when a first number is given.	Assessed at the local level				
MA 4.2.2	Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving equations.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 4.2.2.a	Interpret and evaluate numerical or algebraic expressions using order of operations (excluding exponents).	2	2 - 4			2 - 4
MA 4.2.3	Applications: Students will solve real-world problems involving equations with fractions and mixed numbers.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 4.2.3.a	Solve real-world problems involving multi-step equations comprised of whole numbers using the four operations, including interpreting remainders.	2		2 - 4		1 - 2
MA 4.2.3.b	Solve real-world problems involving addition and subtraction of fractions and mixed numbers with like denominators.	2		2 - 4		2 - 4
Grade 4 Algebra Total		3	3 - 6	3 - 6	0 - 4	12 - 14

MA 4.3	GEOMETRY: Students will communicate geometric concepts and measurement concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 4 Math Geometry				
MA 4.3.1	Characteristics: Students will identify and describe geometric characteristics and create two- and three-dimensional shapes.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 4.3.1.a	Recognize angles as geometric shapes that are formed where two rays share a common endpoint.	Assessed at the local level				
MA 4.3.1.b	Classify an angle as acute, obtuse, or right.	2	0 – 2	0 – 2		1 – 2
MA 4.3.1.c	Identify and draw points, lines, line segments, rays, angles, parallel lines, perpendicular lines, and intersecting lines, and recognize them in two-dimensional figures.	2	0 – 2	0 – 2		1 – 2
MA 4.3.1.d	Classify two-dimensional shapes based on the presence or absence of parallel and perpendicular lines, or the presence or absence of specific angles.	3		0 – 2	0 – 2	1 – 2
MA 4.3.1.e	Identify right triangles.	2	0 – 2	0 – 2		1 – 2
MA 4.3.1.f	Measure angles in whole number degrees using a protractor.	2	1 – 2			1 – 2
MA 4.3.1.g	Sketch angles of a specified measure.	2	1 – 2			1 – 2
MA 4.3.1.h	Recognize and draw lines of symmetry in two-dimensional shapes.	2	1 – 2			1 – 2
MA 4.3.2	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	Assessed at the local level				
MA 4.3.3	Measurement: Students will perform and compare measurements and apply formulas.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 4.3.3.a	Apply perimeter and area formulas for rectangles.	2	0 – 2	0 – 2		1 – 2
MA 4.3.3.b	Identify and use the appropriate tools, operations, and units of measurement, both customary and metric, to solve real-world problems involving time, length, weight, mass, capacity, and volume.	Assessed at the local level				
MA 4.3.3.c	Generate simple conversions from a larger unit to a smaller unit within the customary and metric systems of measurement.	2	1 – 2			1 – 2
Grade 4 Geometry Total		3	5 – 8	3 – 8	0 – 2	10 – 12

MA 4.4 DATA: Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.		Grade 4 Math Data				
		MA 4.4.1	Representations: Students will create displays that represent data.	Max DOK Level	DOK 1	DOK 2
MA 4.4.1.a	Represent data using line plots where the horizontal scale is marked off in appropriate units (e.g., whole numbers, halves, quarters, or eighths).	2		4 – 5		4 – 5
MA 4.4.2	Analysis & Applications: Students will analyze data to address the situation.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 4.4.2.a	Solve problems involving addition or subtraction of fractions using information presented in line plots.	2		4 – 5		4 – 5
MA 4.4.3	Probability: Students will interpret and apply concepts of probability.	<i>No additional indicator(s) at this level.</i>				
Grade 4 Data Total		2		8 – 9		8 – 9

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MA 5.1 NUMBER: Students will communicate number sense concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.		Grade 5 Math Number				
MA 5.1.1.a	Determine multiple equivalent representations for whole numbers and decimals through the thousandths place using standard form, word form, and expanded notation.	2	1 - 2	1 - 2		2 - 4
MA 5.1.1.b	Compare whole numbers, fractions, mixed numbers, and decimals through the thousandths place and represent comparisons using symbols $<$, $>$, or $=$.	2	1 - 2	1 - 2		2 - 4
MA 5.1.1.c	Round whole numbers and decimals to any given place.	1	1 - 2			1 - 2
MA 5.1.1.d	Recognize and generate equivalent forms of commonly used fractions, decimals, and percents (e.g., halves, thirds, fourths, fifths, and tenths).	2	1 - 2	1 - 2		2 - 4
MA 5.1.1.e	Write powers of 10 with exponents.	1	1 - 2			1 - 2
MA 5.1.2	Operations: Students will demonstrate the meaning of operations and compute accurately with whole numbers, fractions, and decimals.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 5.1.2.a	Multiply multi-digit whole numbers using the standard algorithm.	1	1 - 2			1 - 2
MA 5.1.2.b	Divide four-digit whole numbers by a two-digit divisor, with and without remainders using the standard algorithm.	1	1 - 2			1 - 2
MA 5.1.2.c	Multiply a whole number by a fraction or a fraction by a fraction using models and visual representations.	2	1 - 2	1 - 2		2 - 4
MA 5.1.2.d	Divide a unit fraction by a whole number and a whole number by a unit fraction.	1	1 - 2			1 - 2
MA 5.1.2.e	Explain division of a whole number by a fraction using models and visual representations.	Assessed at the local level				
MA 5.1.2.f	Interpret a fraction as division of the numerator by the denominator.	Assessed at the local level				

MA 5.1.2.g	Add, subtract, multiply, and divide decimals to the hundredths using concrete models or drawings and strategies based on place value, properties of operations (i.e. Commutative, Associative, Distributive, Identity, Zero), and/or relationships between operations.	1	1 - 2			1 - 2
MA 5.1.2.h	Add and subtract fractions and mixed numbers with unlike denominators.	1	2 - 4			2 - 4
MA 5.1.2.i	Determine the reasonableness of computations involving whole numbers, fractions, and decimals.	Assessed at the local level				
MA 5.1.2.j	Multiply and divide by powers of 10.	1	1 - 2			1 - 2
Grade 5 Number Total		2	10 - 15	9 - 12		21 - 25

MA 5.2	ALGEBRA: Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 5 Math Algebra				
MA 5.2.1	Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions and equations.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 5.2.1.a	Form ordered pairs from a rule such as $y=2x$, and graph the ordered pairs on a coordinate plane.	2	3 - 5			3 - 5
MA 5.2.2	Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving equations.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 5.2.2.a	Interpret and evaluate numerical or algebraic expressions using order of operations (excluding exponents).	2	2 - 4	2 - 4		4 - 5
MA 5.2.3	Applications: Students will solve real-world problems involving equations with fractions and mixed numbers.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 5.2.3.a	Solve real-world problems involving addition and subtraction of fractions and mixed numbers with like and unlike denominators.	3		2 - 4	0 - 2	2 - 5
Grade 5 Algebra Total		3	5 - 7	4 - 6	0 - 2	11 - 14

MA 5.3	GEOMETRY: Students will communicate geometric concepts and measurement concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 5 Math Geometry				
MA 5.3.1	Characteristics: Students will identify and describe geometric characteristics and create two- and three-dimensional shapes.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 5.3.1.a	Identify three-dimensional figures including cubes, cones, pyramids, prisms, spheres, and cylinders.	1	1 – 2			1 – 2
MA 5.3.1.b	Identify faces, edges, and vertices of rectangular prisms.	1	1 – 2			1 – 2
MA 5.3.1.c	Justify the classification of two-dimensional figures based on their properties.	3		0 – 2	0 – 2	1 – 2
MA 5.3.2	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 5.3.2.a	Identify the origin, x axis, and y axis of the coordinate plane.	Assessed at the local level				
MA 5.3.2.b	Graph and name points in the first quadrant of the coordinate plane using ordered pairs of whole numbers.	2		2 – 4		2 – 4
MA 5.3.3	Measurement: Students will perform and compare measurements and apply formulas.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 5.3.3.a	Recognize that solid figures have volume that is measured in cubic units.	Assessed at the local level				
MA 5.3.3.b	Use concrete models to measure the volume of rectangular prisms in cubic units by counting cubic units.	2		1 – 2		1 – 2
MA 5.3.3.c	Generate conversions within the customary and metric systems of measurement.	2		1 – 2		1 – 2
Grade 5 Geometry Total		3	5 – 8	3 – 8	0 – 2	10 – 12

MA 5.4	DATA: Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 5 Math Data				
MA 5.4.1	Representations: Students will create displays that represent data.	<i>No additional indicator(s) at this level.</i>				
MA 5.4.2	Analysis & Applications: Students will analyze data to address the situation.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 5.4.2.a	Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (e.g., frequency charts) and bar graphs.			2 – 5	0 – 2	4 – 5
MA 5.4.2.b	Formulate questions that can be addressed with data and make predictions about the data.			2 – 5	0 – 2	4 – 5
MA 5.4.3	Probability: Students will interpret and apply concepts of probability.	<i>No additional indicator(s) at this level.</i>				
Grade 5 Data Total		3		4 – 9	0 – 4	8 – 9

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MA 6.1	NUMBER: Students will communicate number sense concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 6 Math Number				
MA 6.1.1	Numeric Relationships: Students will demonstrate, represent, and show relationships among fractions, decimals, percents, and integers within the base-ten number system.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.1.1.a	Determine common factors and common multiples using prime factorization of numbers with and without exponents.	1	1 - 2			1 - 2
MA 6.1.1.b	Represent non-negative whole numbers using exponential notation.	1	1 - 2			1 - 2
MA 6.1.1.c	Compare and order rational numbers both on the number line and not on the number line.	2		2 - 3		2 - 3
MA 6.1.1.d	Convert among fractions, decimals, and percents using multiple representations.	2		1 - 2		1 - 2
MA 6.1.1.e	Determine ratios from drawings, words, and manipulatives.	Assessed at the local level				
MA 6.1.1.f	Explain and determine unit rates.	Assessed at the local level				
MA 6.1.1.g	Model integers using drawings, words, manipulatives, number lines, and symbols.	2		2 - 3		2 - 3
MA 6.1.1.h	Compare and order integers and absolute value both on the number line and not on the number line.	2		1 - 2		1 - 2
MA 6.1.1.i	Determine absolute value of rational numbers.	1	1 - 2			1 - 2
MA 6.1.2	Operations: Students will compute with fractions and decimals accurately.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.1.2.a	Multiply and divide non-negative fractions and mixed numbers.	1	1 - 2			1 - 2
MA 6.1.2.b	Evaluate expressions with positive exponents.	Assessed at the local level				
MA 6.1.2.c	Divide multi-digit whole numbers using the standard algorithm.	2		1 - 2		1 - 2
MA 6.1.2.d	Add, subtract, multiply, and divide decimals using the standard algorithms.	2		1 - 2		1 - 2
MA 6.1.2.e	Estimate and check reasonableness of answers using appropriate strategies and tools.	2		1 - 2		1 - 2
Grade 6 Number Total		2	7 - 9	7 - 9		15 - 17

MA 6.2	ALGEBRA: Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 6 Math Algebra				
MA 6.2.1	Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions, equations, and inequalities.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.2.1.a	Create algebraic expressions (e.g., one operation, one variable as well as multiple operations, one variable) from word phrases.	1	1 - 2			1 - 2
MA 6.2.1.b	Recognize and generate equivalent algebraic expressions involving distributive property and combining like terms.	Assessed at the local level				
MA 6.2.1.c	Represent and analyze the relationship between two variables using graphs, tables, and one-step equations.	Assessed at the local level				
MA 6.2.2	Algebraic Processes: Students will apply the operational properties when evaluating expressions, and solving equations and inequalities.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.2.2.a	Simplify expressions using the distributive property and combining like terms.	1	1 - 2			1 - 2
MA 6.2.2.b	Use substitution to determine if a given value for a variable makes an equation or inequality true.	2		1 - 2		1 - 2
MA 6.2.2.c	Evaluate numerical expressions, including absolute value and exponents, with respect to order of operations.	1	1 - 2			1 - 2
MA 6.2.2.d	Given the value of the variable, evaluate algebraic expressions (which may include absolute value) with respect to order of operations (non-negative rational numbers).	2		1 - 2		1 - 2
MA 6.2.2.e	Solve one-step equations with non-negative rational numbers using addition, subtraction, multiplication and division.	1	1 - 2			1 - 2
MA 6.2.2.f	Use equivalent ratios relating quantities with whole numbers to create a table. Find missing values in the table.	2		2 - 4		2 - 4
MA 6.2.2.g	Represent inequalities on a number line (e.g., graph $x > 3$).	2		1 - 2		1 - 2

MA 6.2.3	Applications: Students will solve real-world problems involving ratios, unit rates, and percents.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.2.3.a	Write equations (e.g., one operation, one variable) to represent real-world problems involving non-negative rational numbers.	Assessed at the local level				
MA 6.2.3.b	Solve real-world problems involving non-negative rational numbers.	2		1 - 2		1 - 2
MA 6.2.3.c	Solve real-world problems involving percents of numbers.	2		1 - 2		1 - 2
MA 6.2.3.d	Solve real-world problems using ratios and unit rates.	2		2 - 4		2 - 4
Grade 6 Algebra Total		2	4 - 6	13 - 15	0 - 2	18 - 21

MA 6.3	GEOMETRY: Students will communicate geometric concepts and measurement concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 6 Math Geometry				
MA 6.3.1	Characteristics: Students will identify and describe geometric characteristics and create two- and three-dimensional shapes.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.3.1.a	Identify and create nets to represent two-dimensional drawings of prisms, pyramids, cylinders, and cones.	2		1 - 2		1 - 2
MA 6.3.2	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.3.2.a	Identify the ordered pair of a given point in the coordinate plane.	2		1 - 2		1 - 2
MA 6.3.2.b	Plot the location of an ordered pair in the coordinate plane.	Assessed at the local level				
MA 6.3.2.c	Identify the quadrant of a given point in the coordinate plane.	2		1 - 2		1 - 2
MA 6.3.2.d	Draw polygons in the coordinate plane given coordinates for the vertices.	2		1 - 2		1 - 2
MA 6.3.2.e	Calculate vertical and horizontal distances in the coordinate plane to find perimeter and area.	Assessed at the local level				

MA 6.3.3	Measurement: Students will perform and compare measurements and apply formulas.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.3.3.a	Determine the area of quadrilaterals, including parallelograms, trapezoids, and triangles by composition and decomposition of polygons as well as application of formulas.	2		2 - 4		2 - 4
MA 6.3.3.b	Determine the surface area of rectangular prisms and triangular prisms using nets.	2		2 - 4		2 - 4
MA 6.3.3.c	Apply volume formulas for rectangular prisms.	2		2 - 4		2 - 4
Grade 6 Geometry Total		2		11 - 13		11 - 13

MA 6.4	DATA: Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 6 Math Data				
MA 6.4.1	Representations: Students will create displays that represent data.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.4.1.a	Represent data using line plots, dot plots, box plots, and histograms.	Assessed at the local level				
MA 6.4.2	Analysis & Applications: Students will analyze data to address the situation.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 6.4.2.a	Solve problems using information presented in line plots, dot plots, box plots, and histograms.	2		2 - 4		2 - 4
MA 6.4.2.b	Compare and interpret data sets based upon their graphical representations (e.g., center, spread, and shape).	3		2 - 3	0 - 2	2 - 4
MA 6.4.2.c	Find and interpret the mean, median, mode, and range for a set of data.	2	1 - 2	1 - 2		2 - 4
MA 6.4.2.d	Compare the mean, median, mode, and range from two sets of data.	3		1 - 2	0 - 2	1 - 3
MA 6.4.3	Probability: Students will interpret and apply concepts of probability.	<i>No additional indicator(s) at this level.</i>				
Grade 6 Data Total		3	1 - 2	7 - 9	0 - 4	9 - 11

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MA 7.1	NUMBER: Students will communicate number sense concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 7 Math Number				
MA 7.1.1	Numeric Relationships: Students will demonstrate, represent, and show relationships among rational numbers within the base-ten number system.	<i>No additional indicator(s) at this level.</i>				
MA 7.1.2	Operations: Students will compute with rational numbers accurately.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 7.1.2.a	Solve problems using proportions and ratios (e.g., cross products, percents, tables, equations, and graphs).	2		3 – 5		3 – 5
MA 7.1.2.b	Add, subtract, multiply, and divide rational numbers (e.g., positive and negative fractions, decimals, and integers).	2		2 – 4		2 – 4
MA 7.1.2.c	Apply properties of operations as strategies for problem solving with rational numbers.	Assessed at the local level				
MA 7.1.2.d	Use multiple strategies to add, subtract, multiply, and divide integers.	2		2 – 4		2 – 4
MA 7.1.2.e	Estimate and check reasonableness of answers using appropriate strategies and tools.	2		2 – 4		2 – 4
Grade 7 Number Total		2		11 – 15		11 – 15

MA 7.2		Grade 7 Math Algebra				
Algebraic Relationships: Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.						
MA 7.2.1	Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions, equations, and inequalities.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 7.2.1.a	Describe and create an inequality from words and pictures (e.g., one-step, one-variable).	2	1 - 2	1 - 2		2 - 4
MA 7.2.1.b	Represent real-world situations with proportions.	2		2 - 4		2 - 4
MA 7.2.2	Algebraic Processes: Students will apply the operational properties when evaluating expressions, and solving equations and inequalities.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 7.2.2.a	Solve equations using the distributive property and combining like terms.	1	1 - 2			1 - 2
MA 7.2.2.b	Use factoring and properties of operations to create equivalent algebraic expressions (e.g., $2x + 6 = 2(x + 3)$).	1	1 - 2			1 - 2
MA 7.2.2.c	Given the value of the variable(s), evaluate algebraic expressions (including absolute value).	1	1 - 2			2 - 4
MA 7.2.2.d	Solve two-step equations involving rational numbers which include the integers.	1	1 - 2			2 - 4
MA 7.2.2.e	Solve one-step inequalities involving integers and rational numbers and represent solutions on a number line.	2		2 - 4		2 - 4
MA 7.2.3	Applications: Students will solve real-world problems involving expressions, equations, and inequalities.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 7.2.3.a	Describe and write linear equations from words and tables.	1	1 - 2			1 - 2
MA 7.2.3.b	Write a two-step equation to represent real-world problems involving rational numbers in any form.	2		2 - 4		2 - 4
MA 7.2.3.c	Solve real-world problems with equations that involve rational numbers in any form.	2		1 - 2		1 - 2
MA 7.2.3.d	Solve real-world problems with inequalities.	2		1 - 2		1 - 2
MA 7.2.3.e	Use proportional relationships to solve real-world problems, including percent problems, (e.g., % increase, % decrease, mark-up, tip, simple interest).	2		2 - 4		2 - 4
MA 7.2.3.f	Solve real-world problems involving scale drawings using a proportional relationship.	2		2 - 4		2 - 4
Grade 7 Algebra Total		2	6 - 8	13 - 15		19 - 22

MA 7.3	GEOMETRY: Students will communicate geometric concepts and measurement concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 7 Math Geometry				
MA 7.3.1	Characteristics: Students will identify and describe geometric characteristics of two-dimensional shapes.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 7.3.1.a	Apply and use properties of adjacent, complementary, supplementary, and vertical angles to find missing angle measures.	2		2 - 4		2 - 4
MA 7.3.1.b	Draw triangles (freehand using a ruler and a protractor, and using technology) with given conditions of three measures of angles or sides, and notice when the conditions determine a unique triangle, more than one triangle, or no triangle.	Assessed at the local level				
MA 7.3.2	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	No additional indicator(s) at this level.				
MA 7.3.3	Measurement: Students will perform and compare measurements and apply formulas.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 7.3.3.a	Solve real-world problems involving perimeter and area of composite shapes made from triangles, quadrilaterals and polygons.	2		2 - 4		2 - 4
MA 7.3.3.b	Solve real-world problems involving surface area and volume of composite shapes made from rectangular and triangular prisms.	2		2 - 4		2 - 4
MA 7.3.3.c	Determine the area and circumference of circles both on and off the coordinate plane.	2		2 - 4		2 - 4
Grade 7 Geometry Total		2		11 - 13		11 - 13

MA 7.4 DATA: Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.		Grade 7 Math Data				
		MA 7.4.1	Representations: Students will create displays that represent data.	Max DOK Level	DOK 1	DOK 2
MA 7.4.1.a	Represent data using circle graphs.	Assessed at the local level				
MA 7.4.2	Analysis & Applications: Students will analyze data to address the situation.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 7.4.2.a	Solve problems using information presented in circle graphs.	2		2 – 4		2 – 4
MA 7.4.2.b	Explain the difference between a population and a sample.	Assessed at the local level				
MA 7.4.2.c	Generate conclusions about a population based upon a random sample.	Assessed at the local level				
MA 7.4.2.d	Determine and critique biases in different data representations.	Assessed at the local level				
MA 7.4.3	Probability: Students will interpret and apply concepts of probability.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 7.4.3.a	Generate a list of possible outcomes for a simple event.	Assessed at the local level				
MA 7.4.3.b	Describe the theoretical probability of an event using a fraction, percentage, and decimal.	2		1 – 2	0 – 2	1 – 3
MA 7.4.3.c	Find theoretical probabilities for independent events.	2		1 – 2	0 – 2	1 – 3
MA 7.4.3.d	Perform simple experiments and express the degree of likelihood (possible, impossible, certain, more likely, equally likely, or less likely); write as fractions and percentages.	Assessed at the local level				
MA 7.4.3.e	Find experimental probability for independent events.	2		1 – 2	0 – 2	1 – 3
MA 7.4.3.f	Compare and contrast theoretical and experimental probabilities.	2		1 – 2	0 – 2	1 – 3
MA 7.4.3.g	Find the probability of dependent compound events.	2		1 – 2	0 – 2	1 – 3
MA 7.4.3.h	Identify complementary events and calculate their probabilities.	2		1 – 2	0 – 2	1 – 3
Grade 7 Data Total		3		12 – 15	0 – 4	12 – 16

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MA 8.1	NUMBER: Students will communicate number sense concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 8 Math Number				
MA 8.1.1	Numeric Relationships: Students will demonstrate, represent, and show relationships among real numbers within the base-ten number system.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.1.1.a	Determine subsets of numbers as natural, whole, integer, rational, irrational, or real, based on the definitions of these sets of numbers.	1	2 - 3			2 - 3
MA 8.1.1.b	Represent numbers with positive and negative exponents and in scientific notation.	1	2 - 3			2 - 3
MA 8.1.1.c	Describe the difference between a rational and irrational number.	Assessed at the local level				
MA 8.1.1.d	Approximate, compare, and order real numbers (both rational and irrational) and order real numbers both off and on the number line.	2		2 - 3		2 - 3
MA 8.1.2	Operations: Students will compute with exponents and roots.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.1.2.a	Evaluate the square roots of perfect squares less than or equal to 400 and cube roots of perfect cubes less than or equal to 125.	1	2 - 3			2 - 3
MA 8.1.2.b	Simplify numerical expressions involving exponents and roots (e.g., 4^{-2} is the same as $1/16$).	1	2 - 3			2 - 3
MA 8.1.2.c	Simplify numerical expressions involving absolute value.	1	2 - 3			2 - 3
MA 8.1.2.d	Multiply and divide numbers using scientific notation.	Assessed at the local level				
MA 8.1.2.e	Estimate and check reasonableness of answers using appropriate strategies and tools.	1	2 - 3			2 - 3
Grade 8 Number Total		2	12 - 15	2 - 3		13 - 16

MA 8.2	ALGEBRA: Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 8 Math Algebra				
MA 8.2.1	Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions, equations, and inequalities.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.2.1.a	Create algebraic expressions, equations, and inequalities (e.g., two-step, one variable) from word phrases, tables, and pictures.	2	1 - 2	1 - 2		2 - 4
MA 8.2.1.b	Determine and describe the rate of change for given situations through the use of tables and graphs.	2		2 - 4		2 - 4
MA 8.2.1.c	Describe equations and linear graphs as having one solution, no solution, or infinitely many solutions.	1	1 - 2			1 - 2
MA 8.2.1.d	Graph proportional relationships and interpret the slope.	2		2 - 4		2 - 4
MA 8.2.2	Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving expressions, equations, and inequalities.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.2.2.a	Solve multi-step equations involving rational numbers with the same variable appearing on both sides of the equal sign.	1	2 - 3			2 - 3
MA 8.2.2.b	Solve two-step inequalities involving rational numbers and represent solutions on a number line.	2		2 - 4		2 - 4
MA 8.2.3	Applications: Students will solve real-world problems involving multi-step equations and multi-step inequalities.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.2.3.a	Describe and write equations from words, patterns, and tables.	2		2 - 4		2 - 4
MA 8.2.3.b	Write a multi-step equation to represent real-world problems using rational numbers in any form.	2		2 - 4		2 - 4
MA 8.2.3.c	Solve real-world multi-step problems involving rational numbers in any form.	3		1 - 3	0 - 2	2 - 4
Grade 8 Algebra Total		3	4 - 6	12 - 14	0 - 2	17 - 21

MA 8.3	GEOMETRY: Students will communicate geometric concepts and measurement concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 8 Math Geometry				
MA 8.3.1	Characteristics: Students will identify and describe geometric characteristics of two-dimensional shapes.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.3.1.a	Determine and use the relationships of the interior angles of a triangle to solve for missing measures.	2		2 - 4		2 - 4
MA 8.3.1.b	Identify and apply geometric properties of parallel lines cut by a transversal and the resulting corresponding, alternate interior, and alternate exterior angles to find missing measures.	2		2 - 4		2 - 4
MA 8.3.2	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.3.2.a	Perform and describe positions and orientation of shapes under single transformations including rotations (in multiples of 90 degrees about the origin), translations, reflections, and dilations on and off the coordinate plane.	2		2 - 4		2 - 4
MA 8.3.2.b	Find congruent two-dimensional figures and define congruence in terms of a series of transformations.	2		1 - 2		1 - 2
MA 8.3.2.c	Find similar two-dimensional figures and define similarity in terms of a series of transformations.	2		1 - 2		1 - 2
MA 8.3.3	Measurement: Students will perform and compare measurements and apply formulas.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.3.3.a	Explain a model of the Pythagorean Theorem.	Assessed at the local level				
MA 8.3.3.b	Apply the Pythagorean Theorem to find side lengths of triangles and to solve real-world problems.	3		2 - 4	0 - 2	3 - 5
MA 8.3.3.c	Find the distance between any two points on the coordinate plane using the Pythagorean Theorem.	2		2 - 4		2 - 4
MA 8.3.3.d	Determine the volume of cones, cylinders, and spheres, and solve real-world problems using volumes.	2		2 - 4		2 - 4
Grade 8 Geometry Total		3		14 - 17	0 - 2	16 - 19

MA 8.4	DATA: Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	Grade 8 Math Data				
MA 8.4.1	Representations: Students will create displays that represent data.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.4.1.a	Represent bivariate data (i.e. ordered pairs) using scatter plots.	2		4 – 5		4 – 5
MA 8.4.2	Analysis & Applications: Students will analyze data to address the situation.	Max DOK Level	DOK 1	DOK 2	DOK 3	Total Points
MA 8.4.2.a	Solve problems and make predictions using an approximate line of best fit.	2		4 – 5		4 – 5
MA 8.4.3	Probability: Students will interpret and apply concepts of probability.	<i>No additional indicator(s) at this level.</i>				
Grade 8 Data Total		2		8 – 10		8 – 10