

Nebraska State Accountability - Mathematics (NeSA-M) Table of Specifications

Grade 6

NUMBER SENSE

| Gr6 Number System | Highest DOK Level Tested | DOK 1 | DOK 2 | DOK 3 | Item Total |
|---|-----------------------------|-------|-------|-------|------------|
| MA 6.1.1 Students will represent and show relationships among positive rational numbers and integers. | | | | | |
| <i>MA 6.1.1.a Show equivalence among common fractions and non-repeating decimals and percents</i> | Assessed at the local level | | | | |
| <i>MA 6.1.1.b Compare and order positive and negative integers</i> | 1 | 1-3 | 0 | 0 | 1-3 |
| <i>MA 6.1.1.c Identify integers less than 0 on a number line</i> | Assessed at the local level | | | | |
| <i>MA 6.1.1.d Represent large numbers using exponential notation</i> | 1 | 1-2 | 0 | 0 | 1-2 |
| <i>MA 6.1.1.e Identify the prime factorization of numbers</i> | 1 | 1-3 | 0 | 0 | 1-3 |
| <i>MA 6.1.1.f Classify numbers as natural, whole, or integer</i> | Assessed at the local level | | | | |
| Gr6 Operations | Highest DOK Level Tested | 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. | | | | | |
| <i>MA 6.1.2.a Use drawings, words, and symbols to explain the meaning of addition and subtraction of fractions</i> | 2 | 0-1 | 1-3 | 0 | 1-4 |
| <i>MA 6.1.2.b Use drawings, words and symbols to explain the meaning of addition and subtraction of decimals</i> | 2 | 0-1 | 1-3 | 0 | 1-4 |
| Gr6 Computation | Highest DOK Level Tested | DOK 1 | DOK 2 | DOK 3 | Item Total |
| MA 6.1.3 Students will compute fluently and accurately using appropriate strategies and tools. | | | | | |
| <i>MA 6.1.3.a Multiply and divide positive rational numbers</i> | 1 | 1-3 | 0 | 0 | 1-3 |
| <i>MA 6.1.3.b Select and apply the appropriate method of computation when problem solving</i> | 2 | 0-1 | 2-3 | 0 | 2-4 |

| Gr6 Estimation | Highest DOK Level Tested | 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. | | | | | |
| <i>MA 6.1.4.a Use appropriate estimation methods to check the reasonableness of solutions for problems involving positive rational numbers</i> | 2 | 0-1 | 1-2 | 0 | 1-3 |
| GEOMETRIC/MEASUREMENT CONCEPTS | | | | | |
| Gr6 Characteristics | Highest DOK Level Tested | 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. | | | | | |
| <i>MA 6.2.1.a Justify the classification of three-dimensional objects</i> | Assessed at the local level | | | | |
| Gr6 Coordinate Geometry | Highest DOK Level Tested | DOK 1 | DOK 2 | DOK 3 | Item Total |
| MA 6.2.2 Students will label points using coordinate geometry. | | | | | |
| <i>MA 6.2.2.a Identify the ordered pair of a plotted point in the coordinate plane</i> | 1 | 1-3 | 0 | 0 | 1-3 |
| Gr6 Transformations | Highest DOK Level Tested | DOK 1 | DOK 2 | DOK 3 | Item Total |
| MA 6.2.3 Students will use and describe results of transformations on geometric shapes. | | | | | |
| <i>MA 6.2.3.a Perform and describe positions and orientation of shapes under single transformations not on a coordinate plane</i> | Assessed at the local level | | | | |
| Gr6 Spatial Modeling | Highest DOK Level Tested | DOK 1 | DOK 2 | DOK 3 | Item Total |
| MA 6.2.4 Students will use visualization of geometric models to solve problems. | | | | | |
| <i>MA 6.2.4.a Identify two-dimensional drawings of three-dimensional objects</i> | 2 | 1-2 | 1-2 | 0 | 2-4 |
| Gr6 Measurement | Highest DOK Level Tested | 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 | Highest DOK Level Tested | 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 | Highest DOK Level Tested | 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 | Highest DOK Level Tested | 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 | Highest DOK Level Tested | DOK 1 | DOK 2 | DOK 3 | Item Total |
| MA 6.4.1 Students will organize, display, compare, and interpret data. | | | | | |
| <i>MA 6.4.1.a Represent data using stem and leaf plots, histograms, and frequency charts</i> | 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 |
| <i>MA 6.4.1.d Compare the mean, median, mode, and range from two sets of data</i> | Assessed at the local level | | | | |
| Gr6 Predictions and Inferences | Highest DOK Level Tested | DOK 1 | DOK 2 | DOK 3 | Item Total |
| MA 6.4.2 Students will construct predictions based on data. | | | | | |
| <i>MA 6.4.2.a Make predictions based on data and create questions to further investigate the quality of the predictions</i> | Assessed at the local level | | | | |
| Gr6 Probability | Highest DOK Level Tested | DOK 1 | DOK 2 | DOK 3 | Item Total |
| MA 6.4.3 Students will apply basic concepts of probability. | | | | | |
| <i>MA 6.4.3.a Describe the theoretical probability of an event using a fraction, percentage, decimal, or ratio</i> | 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 |