

Nebraska State Mathematics Test 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.					
<i>MA 6.1.1.a Show equivalence among common fractions and non-repeating decimals and percents</i>	Assessed at the local level				
MA 6.1.1.b Compare and order positive and negative integers	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				
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
<i>MA 6.1.1.f Classify numbers as natural, whole, or integer</i>	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.					
<i>MA 6.2.1.a Justify the classification of three-dimensional objects</i>	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.					
<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	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.					
<i>MA 6.2.5.a Estimate and measure length with customary and metric units to the nearest 1/16 inch and mm</i>	Assessed at the local level				
<i>MA 6.2.5.b Measure volume/capacity using the metric system</i>	Assessed at the local level				
<i>MA 6.2.5.c Convert length, weight, and liquid capacity from one unit to another within the same system</i>	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.					
<i>MA 6.3.1.a Describe and create simple algebraic expressions from words and tables</i>	2	0-1	1-2	0	1-3
<i>MA 6.3.1.b Use a variable to describe a situation with an equation</i>	2	0-1	1-2	0	1-3
<i>MA 6.3.1.c Identify relationships as increasing, decreasing, or constant</i>	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.					
<i>MA 6.3.2.a Model contextualized problems using various representations</i>	2	2-3	2-3	0	4-6
<i>MA 6.3.2.b Represent a variety of quantitative relationships using symbols and words</i>	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.					
<i>MA 6.3.3.a Explain the multiplication property of equality</i>	Assessed at the local level				
<i>MA 6.3.3.b Evaluate numerical expressions containing multiple operations with respect to order of operations</i>	1	2-4	0	0	2-4
<i>MA 6.3.3.c Evaluate simple algebraic expressions involving multiplication and division</i>	1	1-3	0	0	1-3
<i>MA 6.3.3.d Solve one-step equations involving positive rational numbers</i>	1	1-3	0	0	1-3
<i>MA 6.3.3.e Identify and explain the properties of equality used in solving one-step equations</i>	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.					
<i>MA 6.4.1.a Represent data using stem and leaf plots, histograms, and frequency charts</i>	Assessed at the local level				
<i>MA 6.4.1.b Compare and interpret data sets and their graphical representations</i>	2	0-1	3-4	0	3-5
<i>MA 6.4.1.c Find the mean, median, mode, and range for a set of data</i>	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	DOK Level	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	DOK Level	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				
<i>MA 6.4.3.b Compute theoretical probabilities for independent events</i>	2	0-1	1-2	0	1-3
<i>MA 6.4.3.c Find experimental probability for independent events</i>	1	1-3	0	0	1-3