

Nebraska State Mathematics Test 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.					
<i>MA 7.1.1.a Show equivalence among fractions, decimals, and percents</i>	2	0-1	2-3	0	2-4
<i>MA 7.1.1.b Compare and order rational numbers</i>	2	0-1	1-2	0	1-3
<i>MA 7.1.1.c Represent large numbers using scientific notation</i>	1	1-3	0	0	1-3
<i>MA 7.1.1.d Classify numbers as natural, whole, integer, or rational</i>	Assessed at the local level				
<i>MA 7.1.1.e Find least common multiple and greatest common divisor given two numbers</i>	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.					
<i>MA 7.1.2.a Use drawings, words, and symbols to explain the meaning of multiplication and division of fractions</i>	Assessed at the local level				
<i>MA 7.1.2.b Use drawings, words, and symbols to explain the meaning of multiplication and division of decimals</i>	Assessed at the local level				
<i>MA 7.1.2.c Use drawings, words, and symbols to explain the addition and subtraction of integers</i>	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.					
<i>MA 7.1.3.a Compute accurately with integers</i>	1	2-3	0	0	2-3
<i>MA 7.1.3.b Select, apply, and explain the method of computation when problem solving using integers and positive rational numbers</i>	2	1-2	1-2	0	2-4
<i>MA 7.1.3.c Solve problems involving percent of numbers</i>	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.					

<i>MA 7.1.4.a Use estimation methods to check the reasonableness of solutions for problems involving integers and positive rational numbers</i>	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.					
<i>MA 7.2.1.a Identify and describe similarity of two-dimensional shapes using side and angle measurement</i>	Assessed at the local level				
<i>MA 7.2.1.b Name line, line segment, ray, and angle</i>	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.					
<i>MA 7.2.2.a Plot the location of an ordered pair in the coordinate plane</i>	1	1-2	0	0	1-2
<i>MA 7.2.2.b Identify the quadrant of a given point in the coordinate plane</i>	Assessed at the local level				
<i>MA 7.2.2.c Find the distance between points along horizontal and vertical lines of a coordinate plane</i>	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.					
<i>MA 7.2.3.a Identify lines of symmetry for a reflection</i>	Assessed at the local level				
<i>MA 7.2.3.b Perform and describe positions and orientation of shapes under a single transformation on a coordinate plane</i>	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.					
<i>MA 7.2.4.a Identify the shapes that make up the three-dimensional object</i>	Assessed at the local level				
<i>MA 7.2.4.b Create two-dimensional representations of three-dimensional objects to visualize and solve problems</i>	Assessed at the local level				
<i>MA 7.2.4.c Draw angles to given degree</i>	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.					
<i>MA 7.2.5.a Measure angles to the nearest degree</i>	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
<i>MA 7.2.5.c Recognize the inverse relationship between the size of a unit and the number of units used when measuring</i>	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
<i>MA 7.3.1.c Recognize and generate equivalent forms of simple algebraic expressions</i>	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
<i>MA 7.3.2.b Represent a variety of quantitative relationships using algebraic expressions and one-step equations</i>	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.					
<i>MA 7.3.3.a Explain additive inverse of addition</i>	Assessed at the local level				
<i>MA 7.3.3.b Use symbolic representation of the distributive property</i>	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
<i>MA 7.3.3.f Identify and explain the properties used in solving two-step equations</i>	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.					
<i>MA 7.4.1.a Analyze data sets and interpret their graphical representations</i>	2	0-1	2-3	0	2-4
<i>MA 7.4.1.b Find and interpret mean, median, mode, and range for sets of data</i>	2	0-1	1-2	0	1-3
<i>MA 7.4.1.c Explain the difference between a population and a sample</i>	Assessed at the local level				
<i>MA 7.4.1.d List biases that may be created by various data collection processes</i>	Assessed at the local level				
<i>MA 7.4.1.e Formulate a question about a characteristic that can be answered by simulation or a survey</i>	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.					
<i>MA 7.4.2.a Determine if data collected from a sample can be used to make predictions about a population</i>	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.					
<i>MA 7.4.3.a Find the probability of independent compound events</i>	2	0	1-2	0	1-2
<i>MA 7.4.3.b Compare and contrast theoretical and experimental probabilities</i>	2	0	1-2	0	1-2