

## Nebraska State Accountability - DRAFT 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.	<b>Grade 3 Math Number</b>				
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				
<b>Grade 3 Number Total</b>		<b>2</b>	<b>8 - 16</b>	<b>8 - 16</b>		<b>19 - 22</b>

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 $4 \times 6$ 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
<b>Grade 3 Algebra Total</b>		<b>2</b>	<b>3 - 6</b>	<b>3 - 6</b>		<b>8 - 10</b>

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

<b>MA 3.3.3.h</b>	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
<b>Grade 3 Geometry Total</b>		<b>3</b>	<b>3 - 8</b>	<b>6 - 8</b>	<b>0 - 2</b>	

<b>MA 3.4</b>	<b>DATA: Students will communicate data analysis/probability concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.</b>	<b>Grade 3 Math Data</b>				
<b>MA 3.4.1</b>	<b>Representations: Students will create displays that represent data.</b>	<b>Max DOK Level</b>	<b>DOK 1</b>	<b>DOK 2</b>	<b>DOK 3</b>	<b>Total Points</b>
<b>MA 3.4.1.a</b>	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
<b>MA 3.4.1.b</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
<b>MA 3.4.2</b>	<b>Analysis &amp; Applications: Students will analyze data to address the situation.</b>	<b>Max DOK Level</b>	<b>DOK 1</b>	<b>DOK 2</b>	<b>DOK 3</b>	<b>Total Points</b>
<b>MA 3.4.2.a</b>	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
<b>MA 3.4.3</b>	<b>Probability: Students will interpret and apply concepts of probability.</b>	<i>No additional indicator(s) at this level.</i>				
<b>Grade 3 Data Total</b>		<b>3</b>		<b>6 - 8</b>	<b>0 - 2</b>	<b>8 - 10</b>