

Nebraska State Assessment - Grade 4 Math TOS Crosswalk

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.	
MA 4.1.1	Numeric Relationships: Students will demonstrate, represent, and show relationships among fractions and decimals within the base-ten number system.	Legacy Standard
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.	MA 4.1.1.a MA 4.1.1.b
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.	NONE
MA 4.1.1.c	Classify a number up to 100 as prime or composite.	MA 5.1.1.e
MA 4.1.1.d	Determine whether a given whole number up to 100 is a multiple of a given one-digit number.	MA 5.1.1.f
MA 4.1.1.e	Determine factors of any whole number up to 100.	MA 5.1.1.f
MA 4.1.1.f	Compare whole numbers up to one million and decimals through the hundredths place using >, <, and = symbols, and visual representations.	MA 4.1.1.c
MA 4.1.1.g	Round a multi-digit whole number to any given place.	MA 4.1.1.i
MA 4.1.1.h	Use decimal notation for fractions with denominators of 10 or 100.	NONE
MA 4.1.1.i	Generate and explain equivalent fractions by multiplying by an equivalent fraction of 1.	MA 4.1.1.f
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.	NONE
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).	MA 5.1.1.b
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.	NONE
MA 4.1.2	Operations: Students will demonstrate the meaning of addition and subtraction of whole numbers and fractions and compute accurately.	
MA 4.1.2.a	Add and subtract multi-digit numbers using the standard algorithm.	MA 3.1.3.b
MA 4.1.2.b	Multiply a four-digit whole number by a one-digit whole number.	NONE
MA 4.1.2.c	Multiply a two-digit whole number by a two-digit whole number using the standard algorithm.	MA 4.1.3.c
MA 4.1.2.d	Divide up to a four-digit whole number by a one-digit divisor with and without a remainder.	MA 4.1.3.d

MA 4.1.2.e	Use drawings, words, and symbols to explain the meaning of addition and subtraction of fractions with like denominators.	MA 5.3.2.a
MA 4.1.2.f	Add and subtract fractions and mixed numbers with like denominators.	MA 5.1.3.a
MA 4.1.2.g	Multiply a fraction by a whole number.	NONE
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.	MA 4.1.4.a
MA 4.2	ALGEBRA: Students will communicate algebraic concepts using multiple representations to reason, solve problems, and make connections within mathematics and across disciplines.	
MA 4.2.1	Algebraic Relationships: Students will demonstrate, represent, and show relationships with expressions and equations.	
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., $3 + n = 15$, $81 \div n = 9$).	NONE
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.	NONE
MA 4.2.2	Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving equations.	
MA 4.2.2.a	Interpret and evaluate numerical or algebraic expressions using order of operations (excluding exponents).	MA 5.3.3.c
MA 4.2.3	Applications: Students will solve real-world problems involving equations with fractions and mixed numbers.	
MA 4.2.3.a	Solve real-world problems involving multi-step equations comprised of whole numbers using the four operations, including interpreting remainders.	NONE
MA 4.2.3.b	Solve real-world problems involving addition and subtraction of fractions and mixed numbers with like denominators.	MA 5.3.3.e
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.	
MA 4.3.1	Characteristics: Students will identify and describe geometric characteristics and create two- and three-dimensional shapes.	
MA 4.3.1.a	Recognize angles as geometric shapes that are formed where two rays share a common endpoint.	NONE
MA 4.3.1.b	Classify an angle as acute, obtuse, or right.	MA 4.2.1.b
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.	MA 4.2.1.c

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.	MA 4.2.1.a
MA 4.3.1.e	Identify right triangles.	NONE
MA 4.3.1.f	Measure angles in whole number degrees using a protractor.	MA 5.2.5.a
MA 4.3.1.g	Sketch angles of a specified measure.	NONE
MA 4.3.1.h	Recognize and draw lines of symmetry in two-dimensional shapes.	MA 3.2.3.a
MA 4.3.2	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	
MA 4.3.3	Measurement: Students will perform and compare measurements and apply formulas.	
MA 4.3.3.a	Apply perimeter and area formulas for rectangles.	MA 5.2.5.f
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.	NONE
MA 4.3.3.c	Generate simple conversions from a larger unit to a smaller unit within the customary and metric systems of measurement.	NONE
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.	
MA 4.4.1	Representations: Students will create displays that represent data.	
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).	MA 4.4.1.a
MA 4.4.2	Analysis & Applications: Students will analyze data to address the situation.	
MA 4.4.2.a	Solve problems involving addition or subtraction of fractions using information presented in line plots.	NONE
MA 4.4.3	Probability: Students will interpret and apply concepts of probability.	