I CAN Learn®
EDUCATION SYSTEMS

KANSAS

Correlation to 7th Grade Core Content for Assessment

	Mathematics Curriculum Framework	I CAN Learn® Lesson Number	I CAN Learn® Lesson Title
NUMBER AND COMPUTATION			
M.7.1.1.K1	Knows, explains, and uses equivalent representations for rational numbers and simple algebraic expressions including integers, fractions, decimals, percents, and ratios; integer bases with whole number exponents; positive rational numbers written in scientific notation with positive integer exponents; time; and money, e.g., 253,000 is equivalent to 2.53 x 105 or x + 5x is equivalent to 6x.	MPA-013	Using Powers and Exponents in Expressions
		MPA-021	Converting Between Standard and Scientific Notation
		MPA-029	Converting Fractions and Decimals
		MPA-032	Converting Improper Fractions and Mixed Numbers
		MPA-041	Writing Simple Algebraic Expressions from Phrases
		MPA-043	Reading and Writing Integers
		MPA-078	Expressing Ratios as Fractions and Determining Equivalency
		MPA-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
		HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
		HA1-076	Basic Distributive Property
		HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-860	Using the Laws of Exponents
M.7.1.1.K2	Compares and orders rational numbers and the irrational number pi.	MPA-001	Identifying, Comparing, and Ordering Whole Numbers Through Billions
		MPA-016	Comparing and Ordering Decimals
		MPA-031	Comparing and Ordering Fractions and Decimals
		MPA-045	Comparing and Ordering Integers
		HA1-025	Comparing and Ordering Real Numbers
M.7.1.1.K3	Explains the relative magnitude between rational numbers and between rational numbers and the irrational number pi.	Throughout	
M.7.1.1.K4	Knows and explains what happens to the product or quotient when:		
	a. a whole number is multiplied or divided by a rational number greater than zero and less than one,	MPA-019	Multiplying Decimals
		MPA-036	Multiplying Fractions and Mixed Numbers and Simplifying
		MPA-037	Dividing Fractions and Mixed Numbers and Simplifying
		HA1-050	Multiplying Real Numbers
		HA1-055	Dividing Real Numbers
	b. a whole number is multiplied or divided by a rational number greater than one,	MPA-019	Multiplying Decimals
		MPA-036	Multiplying Fractions and Mixed Numbers and Simplifying
		MPA-037	Dividing Fractions and Mixed Numbers and Simplifying

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		MPA-051	Multiplying Integers with Like and Unlike Signs
		MPA-052	Dividing Integers with Like and Unlike Signs
		HA1-050	Multiplying Real Numbers
		HA1-055	Dividing Real Numbers
	c. a rational number (excluding zero) is multiplied or divided by zero.	MPA-019	Multiplying Decimals
		MPA-036	Multiplying Fractions and Mixed Numbers and Simplifying
		MPA-037	Dividing Fractions and Mixed Numbers and Simplifying
		MPA-051	Multiplying Integers with Like and Unlike Signs
		MPA-052	Dividing Integers with Like and Unlike Signs
		HA1-050	Multiplying Real Numbers
		HA1-055	Dividing Real Numbers
M.7.1.1.K5	Explains and determines the absolute value of rational numbers.	MPA-044	Finding Opposite and Absolute Values of Integers
		HA1-030	Using Opposites and Absolute Values
M.7.1.2.K1	Knows and explains the relationships between natural (counting) numbers, whole numbers, integers, and rational numbers using mathematical models, e.g., number lines or Venn diagrams.	MPA-124	Classifying Numbers in the Real Number System
M.7.1.2.K2	Classifies a given rational number as a member of various subsets of the rational number system, e.g., - 7 is a rational number and an integer.	MPA-124	Classifying Numbers in the Real Number System
M.7.1.2.K3	Names, uses, and describes these properties with the rational number system and demonstrates their meaning including the use of concrete objects:		
	a. commutative properties of addition and multiplication (changing the order of the numbers does not change the solution);	MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
		HA1-130	Identifying Postulates, Theorems, and Properties
	b. associative properties of addition and multiplication (changing the grouping of the numbers does not change the solution);	MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
		HA1-130	Identifying Postulates, Theorems, and Properties
	c. distributive property [distributing multiplication or division over addition or subtraction, e.g., 2(4 – 1) = 2(4) – 2(1) = 8 – 2 = 6];	MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
		HA1-076	Basic Distributive Property
		HA1-130	Identifying Postulates, Theorems, and Properties
	d. substitution property (one name of a number can be substituted for another name of the same number), e.g., if a = 2, then 3a = 3 x 2 = 6.	MPA-014	Evaluating Expressions for Given Variables
		HA1-005	Evaluating Algebraic Expressions
M.7.1.2.K4	Uses and describes these properties with the rational number system and demonstrates their meaning including the use of concrete objects:		
	a. identity properties for addition and multiplication (additive identity – zero added to any number is equal to that number; multiplicative identity – one multiplied by any number is equal to that number);	MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
		HA1-130	Identifying Postulates, Theorems, and Properties
	b. symmetric property of equality (if 7 + 2x = 9 then 9 = 7 + 2x);	HA1-130	Identifying Postulates, Theorems, and Properties
	c. zero property of multiplication (any number multiplied by zero is zero);	HA1-050	Multiplying Real Numbers
		HA1-130	Identifying Postulates, Theorems, and Properties
	d. addition and multiplication properties of equality (adding/multiplying the same number to each side of an equation results in an equivalent equation);	MPA-010	Solving One-Step Equations of Whole Numbers Using Addition and Subtraction
		MPA-011	Solving One-Step Equations of Whole Numbers Using Multiplication and Division
		HA1-115	Using the Addition and Subtraction Properties for Equations
		HA1-120	Using the Multiplication and Division Properties for Equations

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	e. additive and multiplicative inverse properties. (Every number has a value known as its additive inverse and when the original number is added to that additive inverse, the answer is zero, e.g., +5 + –5 = 0. Every number except 0 has a value known as its multiplicative inverse and when the original number multiplied by its inverse, the answer will be 1, e.g., 8 x 1/8 =1.)	HA1-130	Identifying Postulates, Theorems, and Properties
M.7.1.2.K5	Recognizes that the irrational number pi can be represented by approximate rational values, e.g., 22/7 or 3.14.	MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
M.7.1.3.K1	Estimates quantities with combinations of rational numbers and/or the irrational number pi using various computational methods including mental math, paper and pencil, concrete objects, and/or appropriate technology.	MPA-004	Using Rounding to Estimate
		MPA-005	Estimating Products and Quotients Using Patterns
		MPA-017	Rounding Decimals and Estimating Computations Using Decimals
		MPA-023	Rounding Quotients Involving Decimals
		MPA-033	Estimating Computations with Fractions and Mixed Numbers
		MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
M.7.1.3.K2	Uses various estimation strategies and explains how they were used to estimate rational number quantities and the irrational number pi.	MPA-004	Using Rounding to Estimate
		MPA-005	Estimating Products and Quotients Using Patterns
		MPA-017	Rounding Decimals and Estimating Computations Using Decimals
		MPA-023	Rounding Quotients Involving Decimals
		MPA-033	Estimating Computations with Fractions and Mixed Numbers
		MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
M.7.1.3.K3	Recognizes and explains the difference between an exact and approximate answer.	MPA-133	Distinguishing Between Exact and Approximate Answers
M.7.1.3.K4	Determines the appropriateness of an estimation strategy used and whether the estimate is greater than (overestimate) or less than (underestimate) the exact answer and its potential impact on the result.	MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
M.7.1.3.K5	Knows and explains why the fraction (22/7) or decimal (3.14) representation of the irrational number pi is an approximate value.	MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
M.7.1.4.K1	Computational methods including mental math, paper and pencil, concrete objects, and appropriate technology.	Throughout	
M.7.1.4.K2	Performs and explains these computational procedures:		
	a. adds and subtracts decimals from ten millions place through hundred thousandths place;	MPA-018	Adding and Subtracting Decimals
	b. multiplies and divides a four-digit number by a two-digit number using numbers from thousands place through thousandths place;	MPA-019	Multiplying Decimals
		MPA-020	Multiplying Decimals by Powers of Ten
		MPA-119	Dividing Decimals
		MPA-122	Modeling Multiplication and Division of Decimals
	c. multiplies and divides using numbers from thousands place through thousandths place by 10; 100; 1,000; .1; .01; .001; or single-digit multiples of each, e.g., 54.2 ÷ .002 or 54.3 x 300;	MPA-019	Multiplying Decimals
		MPA-020	Multiplying Decimals by Powers of Ten
		MPA-119	Dividing Decimals
		MPA-122	Modeling Multiplication and Division of Decimals
	d. adds, subtracts, multiplies, and divides fractions and expresses answers in simplest form;	MPA-034	Adding and Subtracting Fractions

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		MPA-035	Adding and Subtracting Mixed Numbers with Unlike Denominators
		MPA-036	Multiplying Fractions and Mixed Numbers and Simplifying
		MPA-037	Dividing Fractions and Mixed Numbers and Simplifying
		MPA-123	Modeling Multiplication and Division of Fractions
	e. adds, subtracts, multiplies, and divides integers;	MPA-047	Adding Integers with Like Signs
		MPA-048	Adding Integers with Unlike Signs
		MPA-050	Subtracting Integers with Unlike Signs
		MPA-051	Multiplying Integers with Like and Unlike Signs
		MPA-052	Dividing Integers with Like and Unlike Signs
		MPA-053	Adding, Subtracting, Multiplying, and Dividing Integers
		MPA-117	Modeling Integer Arithmetic Using Cups and Counters
	f. uses order of operations (evaluates within grouping symbols, evaluates powers to the second or third power, multiplies or divides in order from left to right, then adds or subtracts in order from left to right) using whole numbers;	MPA-008	Order of Operations
	g. simplifies positive rational numbers raised to positive whole number powers;	MPA-013	Using Powers and Exponents in Expressions
	h. combines like terms of a first degree algebraic expression.	HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
M.7.1.4.K3	Recognizes, describes, and uses different ways to express computational procedures, e.g., 5 – 2 = 5 + (–2) or 49 x 23 = (40 x 23) + (9 x 23) or 49 x 23 = (49 x 20) + (49 x 3) or 49 x 23 = (50 x 23) – 23.	Throughout	
M.7.1.4.K4	Finds prime factors, greatest common factor, multiples, and the least common multiple.	MPA-024	Using Divisibility Rules
		MPA-025	Identifying Prime and Composite Numbers
		MPA-026	Using Prime Factorization
		MPA-027	Finding the Greatest Common Factor
		MPA-030	Finding Least Common Multiple of Two or More Numbers
M.7.1.4.K5	Finds percentages of rational numbers, e.g., 12.5% x $40.25 = n or 150% of 90 is what number? (For the purpose of assessment, percents will not be between 0 and 1.)	MPA-083	Finding Number Given Percent and Total
		MPA-084	Finding Percent Given Number and Total
		MPA-085	Finding Total Given Number and Percent
ALGEBRA			
M.7.2.1.K1	Identifies, states, and continues a pattern presented in various formats including numeric (list or table), algebraic (symbolic notation), visual (picture, table, or graph), verbal (oral description), kinesthetic (action), and written using these attributes:		
	a. counting numbers including perfect squares, cubes, and factors and multiples (number theory);	MPA-026	Using Prime Factorization
		MPA-027	Finding the Greatest Common Factor
		MPA-030	Finding Least Common Multiple of Two or More Numbers
		MPA-064	Finding Square Roots of Perfect Squares
		HA1-492	Simplifying Simple Square and Cube Roots
	b. positive rational numbers including arithmetic and geometric sequences (arithmetic: sequence of numbers in which the difference of two consecutive numbers is the same, geometric: a sequence of numbers in which each succeeding term is obtained by multiplying the preceding term by the same number), e.g., 2, ½, 1/8, 1/32, …;	MPA-104	Recognizing Patterns
		HA1-447	Identifying Number Patterns
	c. geometric figures;	MPA-111	Comparing the Perimeters, Areas, and Volumes of Similar Geometric Figures
	d. measurements;	Throughout	

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	e. things related to daily life, e.g., tide, moon cycle, or temperature.	Throughout	
M.7.2.1.K2	Generates a pattern.	MPA-104	Recognizing Patterns
		HA1-447	Identifying Number Patterns
M.7.2.1.K3	Extends a pattern when given a rule of one or two simultaneous changes (addition, subtraction, multiplication, division) between consecutive terms, e.g., find the next three numbers in a pattern that starts with 3, where you double and add 1 to get the next number; the next three numbers are 7, 15, and 31.	MPA-104	Recognizing Patterns
		HA1-447	Identifying Number Patterns
M.7.2.1.K4	States the rule to find the nth term of a pattern with one operational change (addition or subtraction) between consecutive terms, e.g., given 3, 5, 7, and 9; the nth term is 2n +1. (This is the explicit rule for the pattern.)	HA1-448	Finding the nth Term of a Pattern
M.7.2.2.K1	Knows and explains that a variable can represent a single quantity that changes, e.g., daily temperature.	HA1-005	Evaluating Algebraic Expressions
M.7.2.2.K2	Knows, explains, and uses equivalent representations for the same simple algebraic expressions, e.g., x + y + 5x is the same as 6x + y.	HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
M.7.2.2.K3	Shows and explains how changes in one variable affect other variables, e.g., changes in diameter affects circumference.	HA1-100	Finding Solution Sets of Open Sentences from Given Replacement Sets
		HA1-104	Translating Word Statements into Equations
		HA1-401	How Variations of "*m*" and "*b*" Affect the Graph of $y = mx + b$
M.7.2.2.K4	Explains the difference between an equation and an expression.	HA1-005	Evaluating Algebraic Expressions
		HA1-104	Translating Word Statements into Equations
M.7.2.2.K5	Solves:		
	a. one-step linear equations in one variable with positive rational coefficients and solutions, e.g., 7x = 28 or x + 3 = 7 or x/4 = 5/3;	MPA-009	Solving One-Step Equations Using a Box
		MPA-010	Solving One-Step Equations of Whole Numbers Using Addition and Subtraction
		MPA-011	Solving One-Step Equations of Whole Numbers Using Multiplication and Division
		MPA-012	Solving One-Step Equations of Whole Numbers Using All Operations
		MPA-038	Solving One-Step Equations with Fractions Using Addition and Subtraction
		MPA-039	Solving One-Step Equations with Fractions Using Multiplication and Division
		MPA-040	Solving One-Step Equations with Decimals Using All Four Operations
		MPA-042	Solving Problems Using an Equation
		MPA-080	Solving Proportions
	b. two-step linear equations in one variable with counting number coefficients and constants and positive rational solutions;	MPA-100	Solving Two-Step Equations
	c. one-step linear inequalities with counting numbers and one variable, e.g., 3x > 12.	MPA-109	Solving and Graphing Linear Inequalities on a Number Line
M.7.2.2.K6	Explains and uses the equality and inequality symbols (=, ≠, <, ≤, >, ≥) and corresponding meanings (is equal to, is not equal to, is less than, is less than or equal to, is greater than, is greater than or equal to) to represent mathematical relationships with rational numbers.	MPA-001	Identifying, Comparing, and Ordering Whole Numbers Through Billions
		MPA-109	Solving and Graphing Linear Inequalities on a Number Line
M.7.2.2.K7	Knows the mathematical relationship between ratios, proportions, and percents and how to solve for a missing term in a proportion with positive rational number solutions and monomials, e.g., 5/6 = 2/x	MM1-360	Expressing Percent as a Ratio
		MPA-078	Expressing Ratios as Fractions and Determining Equivalency
		MPA-080	Solving Proportions
M.7.2.2.K8	Evaluates simple algebraic expressions using positive rational numbers, e.g., if x = 3/2, y = 2, then 5xy + 2 = 5(3/2)(2) + 2 = 17.	MPA-014	Evaluating Expressions for Given Variables
		HA1-005	Evaluating Algebraic Expressions

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M.7.2.3.K1	Recognizes constant and linear relationships using various methods including mental math, paper and pencil, concrete objects, and graphing utilities or appropriate technology.	MPA-102	Graphing Equations by Plotting Points
M.7.2.3.K2	Finds the values and determines the rule through two operations using a function table (input/output machine, T-table).	MPA-102	Graphing Equations by Plotting Points
		HA1-439	Using Function Notation
		MPA-270	Generating Algebraic Expressions from Patterns of Models (Future Release)
M.7.2.3.K3	Demonstrates mathematical relationships using ordered pairs in all four quadrants of a coordinate plane.	MPA-046	Graphing Points on a Coordinate Plane
		MPA-102	Graphing Equations by Plotting Points
M.7.2.3.K4	Describes and/or gives examples of mathematical relationships that remain constant, e.g., you will get $10.00 to do a job, no matter how long it takes for you to do it.	HA1-104	Translating Word Statements into Equations
M.7.2.4.K1	Knows, explains, and uses mathematical models to represent and explain mathematical concepts, procedures, and relationships. Mathematical models include:		
	a. process models (concrete objects, pictures, diagrams, number lines, hundred charts, measurement tools, multiplication arrays, division sets, or coordinate grids) to model computational procedures, algebraic relationships, and mathematical relationships and to solve equations.	Throughout	
	b. place value models (place value mats, hundred charts, base ten blocks, or unifix cubes) to compare, order, and represent numerical quantities and to model computational procedures.	MPA-001	Identifying, Comparing, and Ordering Whole Numbers Through Billions
		MPA-015	Identifying the Place Value of Decimals Through Thousandths
		MPA-016	Comparing and Ordering Decimals
	c. fraction and mixed number models (fraction strips or pattern blocks) and decimal and money models (base ten blocks or coins) to compare, order, and represent numerical quantities.	MPA-122	Modeling Multiplication and Division of Decimals
		MPA-123	Modeling Multiplication and Division of Fractions
	d. factor trees to find least common multiple and greatest common factor and to model prime factorization.	MPA-026	Using Prime Factorization
	e. equations and inequalities to model numerical relationships.	Throughout	
	f. function tables to model numerical and algebraic relationships.	MPA-102	Graphing Equations by Plotting Points
		HA1-380	Graphing Linear Equations
	g. coordinate planes to model relationships between ordered pairs and linear equations.	MPA-046	Graphing Points on a Coordinate Plane
		MPA-102	Graphing Equations by Plotting Points
	h. two- and three-dimensional geometric models (geoboards, dot paper, nets or solids) to model perimeter, area, volume, and surface area, and properties of two- and three-dimensional.	MPA-106	Identifying a Solid Figure From a Net
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
		MPA-115	Finding the Volumes of Prisms, Cylinders, Pyramids, and Cones Using Models
	i. geometric models (spinners, targets, or number cubes), process models (coins, pictures, or diagrams), and tree diagrams to model probability.	MPA-089	Using Tree Diagrams
		MPA-091	Finding the Number of Combinations of a Set of Objects
		MPA-090	Finding the Probability of Simple Real-Life Events
		MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
		MPA-113	Finding the Probability of Compound Events Through Experimentation
		MPA-114	Finding the Odds of Events and Experimental Probability from a Math Model
	j. frequency tables, bar graphs, line graphs, circle graphs, Venn diagrams, charts, tables, single stem-and-leaf plots, scatter plots, and box-and-whisker	MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs

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	plots to organize and display data.		
		MPA-094	Interpreting and Constructing Line Plots
		MPA-096	Constructing Stem-and-Leaf Plots
		MPA-097	Constructing Box-and-Whisker Plots
		MPA-129	Choosing Appropriate Scales and Intervals for Data
		MPA-132	Interpreting and Creating Scatter Plots
		HA1-545	Making a Frequency Distribution Table
		HA1-886	Unions and Intersections of Sets Using Venn Diagrams
	k. Venn diagrams to sort data and show relationships.	HA1-886	Unions and Intersections of Sets Using Venn Diagrams
GEOMETRY			
M.7.3.1.K1	Recognizes and compares properties of two- and three-dimensional figures using concrete objects, constructions, drawings, appropriate terminology, and appropriate technology.	MPA-058	Identifying Polygons
		MPA-059	Classifying Triangles and Quadrilaterals
		MPA-060	Determining Which Figures Tessellate
		MPA-072	Identifying 3-D Figures
		MPA-106	Identifying a Solid Figure From a Net
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
M.7.3.1.K2	Classifies regular and irregular polygons having through ten sides as convex or concave.	MPA-058	Identifying Polygons
M.7.3.1.K3	Identifies angle and side properties of triangles and quadrilaterals:		
	a. sum of the interior angles of any triangle is 180°;	MPA-059	Classifying Triangles and Quadrilaterals
	b. sum of the interior angles of any quadrilateral is 360°;	MPA-059	Classifying Triangles and Quadrilaterals
	c. parallelograms have opposite sides that are parallel and congruent;	MPA-059	Classifying Triangles and Quadrilaterals
	d. rectangles have angles of 90°, opposite sides are congruent;	MPA-059	Classifying Triangles and Quadrilaterals
	e. rhombi have all sides the same length, opposite angles are congruent;	MPA-059	Classifying Triangles and Quadrilaterals
	f. squares have angles of 90°, all sides congruent;	MPA-059	Classifying Triangles and Quadrilaterals
	g. trapezoids have one pair of opposite sides parallel and the other pair of opposite sides are not parallel.	MPA-059	Classifying Triangles and Quadrilaterals
M.7.3.1.K4	Identifies and describes:		
	a. the altitude and base of a rectangular prism and triangular prism,	MPA-072	Identifying 3-D Figures
		MPA-073	Finding the Surface Area of Rectangular Prisms
		MPA-075	Finding the Volume of Rectangular Prisms
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
	b. the radius and diameter of a cylinder.	MPA-072	Identifying 3-D Figures
		MPA-074	Finding the Surface Area of Cylinders
		MPA-076	Finding the Volume of Cylinders
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
M.7.3.1.K5	Identifies corresponding parts of similar and congruent triangles and quadrilaterals.	MPA-058	Identifying Polygons
		MPA-059	Classifying Triangles and Quadrilaterals
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
M.7.3.1.K6	Uses symbols for right angle within a figure, parallel (||), perpendicular (⊥), and triangle (Δ) to describe geometric figures	MM1-455	Identifying Basic Terms Used in Geometry
		MPA-056	Classifying Angles
		MPA-059	Classifying Triangles and Quadrilaterals
		MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
M.7.3.1.K7	Classifies triangles as:		
	a. scalene, isosceles, or equilateral;	MPA-059	Classifying Triangles and Quadrilaterals
	b. right, acute, obtuse, or equiangular	MPA-059	Classifying Triangles and Quadrilaterals

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M.7.3.1.K8	Determines if a triangle can be constructed given sides of three different lengths.	HGM-160	Investigating Inequalities Involving One Triangle (Future Release)
M.7.3.1.K9	Generates a pattern for the sum of angles for 3-, 4-, 5-, … n-sides polygons.	MPA-060	Determining Which Figures Tessellate
M.7.3.1.K10	Describes the relationship between the diameter and the circumference of a circle.	MPA-070	Finding the Circumference of a Circle
M.7.3.2.K1	Determines and uses rational number approximations (estimations) for length, width, weight, volume, temperature, time, perimeter, and area using standard and nonstandard units of measure.	MPA-130	Developing a Sense of Relative Sizes of Measures
		Throughout	
M.7.3.2.K2	Selects and uses measurement tools, units of measure, and level of precision appropriate for a given situation to find accurate rational number representations for length, weight, volume, temperature, time, perimeter, area, and angle measurements.	MPA-130	Developing a Sense of Relative Sizes of Measures
		MPA-133	Distinguishing Between Exact and Approximate A*nswers*
M.7.3.2.K3	Converts within the customary system and within the metric system.	MPA-062	Converting Units in Customary System
		MPA-061	Converting Metric Units of Length, Capacity, and Mass
M.7.3.2.K4	Knows and uses perimeter and area formulas for circles, squares, rectangles, triangles, and parallelograms.	MPA-055	Finding the Perimeter of a Figure
		MPA-067	Finding the Area of Rectangles and Parallelograms
		MPA-069	Finding the Area of Triangles and Trapezoids
		MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
M.7.3.2.K5	Finds perimeter and area of two-dimensional composite figures of circles, squares, rectangles, and triangles.	MPA-055	Finding the Perimeter of a Figure
		MPA-068	Finding the Area of Irregular Figures
M.7.3.2.K6	Uses given measurement formulas to find:		
	a. surface area of cubes,	MPA-073	Finding the Surface Area of Rectangular Prisms
	b. volume of rectangular prisms.	MPA-075	Finding the Volume of Rectangular Prisms
M.7.3.2.K7	Finds surface area of rectangular prisms using concrete objects.	MPA-073	Finding the Surface Area of Rectangular Prisms
M.7.3.2.K8	Uses appropriate units to describe rate as a unit of measure, e.g., miles per hour.	MPA-079	Unit rates
M.7.3.2.K9	Finds missing angle measurements in triangles and quadrilaterals.	MPA-057	Identifying and Applying Supplementary and Complementary Angles
		MPA-059	Classifying Triangles and Quadrilaterals
		HGM-130	Investigating Polygons and Their Angles (Future Release)
		HGM-150	Using Interior and Exterior Angles of Triangles (Future Release)
M.7.3.3.K1	Identifies, describes, and performs single and multiple transformations [reflection, rotation, translation, reduction (contraction/shrinking), enlargement (magnification/growing)] on a two-dimensional figure.	MM1-500	Using Translations, Rotations and Reflections to Transform Shapes
		MPA-108	Graphing Translations and Reflections on the Coordinate Plane
		MPA-120	Applying Dilations in the Coordinate Plane
M.7.3.3.K2	Identifies three-dimensional figures from various perspectives (top, bottom, sides, corners).	HA1-893	Constructing Solids from Different Perspectives
M.7.3.3.K3	Draws three-dimensional figures from various perspectives (top, bottom, sides, corners).	HA1-893	Constructing Solids from Different Perspectives
M.7.3.3.K4	Generates a tessellation.	MPA-060	Determining Which Figures Tessellate
M.7.3.4.K1	Finds the distance between the points on a number line by computing the absolute value of their difference.	MPA-047	Adding Integers with Like Signs
		MPA-048	Adding Integers with Unlike Signs
M.7.3.4.K2	Uses all four quadrants of a coordinate plane to:		
	a. identify in which quadrant or on which axis a point lies when given the coordinates of a point,	MPA-046	Graphing Points on a Coordinate Plane

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	b. plot points,	MPA-046	Graphing Points on a Coordinate Plane
	c. identify points,	MPA-046	Graphing Points on a Coordinate Plane
	d. list through five ordered pairs of a given line.	MPA-102	Graphing Equations by Plotting Points
M.7.3.4.K3	Uses a given linear equation with whole number coefficients and constants and a whole number solution to find the ordered pairs, organize the ordered pairs using a T-table, and plot the ordered pairs on the coordinate plane.	MPA-102	Graphing Equations by Plotting Points
M.7.3.4.K4	Examines characteristics of two-dimensional figures on a coordinate plane using various methods including mental math, paper and pencil, concrete objects, and graphing utilities or other appropriate technology.	MM1-643	Finding Perimeter of Polygons on the Coordinate Plane (Future Release)
		MPA-160	Finding the Area of Polygons on the Coordinate Plane (Future Release)
DATA			
M.7.4.1.K1	Finds the probability of a compound event composed of two independent events in an experiment or simulation.	MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
		MPA-113	Finding the Probability of Compound Events Through Experimentation
M.7.4.1.K2	Explains and gives examples of simple or compound events in an experiment or simulation having probability of zero or one.	MPA-090	Finding the Probability of Simple Real-Life Events
		MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
		MPA-113	Finding the Probability of Compound Events Through Experimentation
M.7.4.1.K3	Uses a fraction, decimal, and percent to represent the probability of:		
	a. a simple event in an experiment or simulation;	MPA-090	Finding the Probability of Simple Real-Life Events
	b. a compound event composed of two independent events in an experiment or simulation.	MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
		MPA-113	Finding the Probability of Compound Events Through Experimentation
M.7.4.1.K4	Finds the probability of a simple event in an experiment or simulation using geometric models, e.g., using spinners or dartboards, what is the probability of landing on 2? The answer is ¼, .25, or 25%.	MPA-090	Finding the Probability of Simple Real-Life Events
M.7.4.2.K1	Organizes, displays, and reads quantitative (numerical) and qualitative (non-numerical) data in a clear, organized, and accurate manner including a title, labels, categories, and rational number intervals using these data displays:		
	a. frequency tables;	MPA-129	Choosing Appropriate Scales and Intervals for Data
	b. bar, line, and circle graphs;	MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs
	c. Venn diagrams or other pictorial displays;	MM1-435	Using Pictographs, Bar Graphs and Line Graphs to Solve Problems
		HA1-886	Unions and Intersections of Sets Using Venn Diagrams
	d. charts and tables;	MM1-425	Classifying Information from a Mathematical Story
		MM1-430	Using Graphs to Solve Story Problems
		MPA-129	Choosing Appropriate Scales and Intervals for Data
	e. stem-and-leaf plots (single);	MPA-096	Constructing Stem-and-Leaf Plots
	f. scatter plots;	MPA-132	Interpreting and Creating Scatter Plots
	g. box-and-whiskers plots.	MPA-097	Constructing Box-and-Whisker Plots
M.7.4.2.K2	Selects and justifies the choice of data collection techniques (observations, surveys, or interviews) and sampling techniques (random sampling, samples of convenience, or purposeful sampling) in a given situation.	MM1-385	Collecting Data
M.7.4.2.K3	Conducts experiments with sampling and describes the results.	MM1-385	Collecting Data
M.7.4.2.K4	Determines the measures of central tendency (mode, median, mean) for a rational number data set.	MPA-095	Find the Mean, Median, and Mode
M.7.4.2.K5	Identifies and determines the range and the quartiles of a rational number data set.	MPA-097	Constructing Box-and-Whisker Plots

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M.7.4.2.K6	Identifies potential outliers within a set of data by inspection rather than formal calculation (2.4.K1a) ($), e.g., consider the data set of 1, 100, 101, 120, 140, and 170; the outlier is 1.	MPA-097	Constructing Box-and-Whisker Plots

MM1-Fundamentals of Mathematics
MPA- Pre-Algebra
HA1-Algebra 1
Note: Standards were taken from the Kansas Curricular Standards for Mathematics Education for Grade 7 document adopted by the Kansas State Board of Education in July 2003 and updated in July 2004