



	Mathematics Curriculum Framework	I CAN Learn® Lesson #	I CAN Learn® Lesson Title
8.1	NUMBER AND OPERATIONS		
8.1.1.A	*compare and order all rational numbers including percents, and find their approximate location on a number line	MPA-045	Comparing and Ordering Integers
		MPA-044	Finding Opposite and Absolute Values of Integers
		MPA-046	Graphing Points on a Coordinate Plane
		MM1-602	Comparing and Ordering Rational Numbers
8.1.1.B	use fractions, decimals and percents to solve problems	MPA-033	Estimating Computations with Fractions and Mixed Numbers
		MPA-116	Solving Real-Life Problems by Using Guess-and-Check and Working Backwards
		MPA-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
		MPA-086	Solving Problems Using Percent
		MPA-087	Finding Percent Increase and Decrease
		MPA-126	Solving Real-World Problems Involving Sales Tax
		MPA-127	Solving Real-World Problems Involving Discounts, Markups, and Commission
		MPA-128	Solving Real-World Problems Involving Simple and Compound Interest
		MPA-088	Solving Real-World Problems Involving Percent
8.1.1.C	*recognize equivalent representations for the same number and generate them by <u>decomposing and composing numbers</u> , including scientific notation	MPA-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
		MPA-021	Converting Between Standard and Scientific Notation
		MPA-083	Finding Number Given Percent and Total
		MPA-084	Finding Percent Given Number and Total
		MPA-085	Finding Total Given Number and Percent
		MPA-124	Classifying Numbers in the Real Number System
8.1.2.C	apply <u>properties of operations</u> to all rational numbers including order of operations and inverse operations	MPA-008	Order of Operations
		MPA-054	Solving One-Step Equations with Integers Using all Four Operations
		MPA-040	Solving One-Step Equations with Decimals Using All Four Operations
		MPA-170	Solving Equations Using the Distributive Property
		MPA-175	Solving Equations with Variables on Both Sides
8.2	ALGEBRAIC RELATIONSHIPS		
8.2.1.B	generalize patterns represented <u>graphically</u> or <u>numerically</u> with words or <u>symbolic rules</u> , using <u>explicit notation</u>	MPA-104	Recognizing Patterns
		MPA-270	Generating Algebraic Expressions from Patterns of Models
8.2.1.C	compare and contrast various forms of <u>representations</u> of patterns	MPA-104	Recognizing Patterns
		MPA-270	Generating Algebraic Expressions from Patterns of Models
8.2.1.D	identify <u>functions</u> as <u>linear</u> or <u>nonlinear</u> from tables, graphs or equations	MPA-150	Identifying and Graphing Linear and Nonlinear Functions
8.2.2.A	use <u>symbolic algebra</u> to represent and solve problems that involve linear relationships	MPA-142	Solving Problems With Linear Functions and Direct Variation
		MPA-270	Generating Algebraic Expressions from Patterns of Models
8.2.2.B	use properties to generate equivalent forms for simple algebraic expressions that include all rationals	HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
		HA1-076	Basic Distributive Property

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8.2.3.A	model and solve problems, using multiple representations such as graphs, tables, and linear equations	HA1-085 MPA-117	Simplifying Expressions Using the Properties of Real Numbers Modeling Algebraic Expressions and Equations Using Cups and Counters
		MPA-125	Formulating a Possible Problem Situation Given an Equation
		MPA-142	Solving Problems With Linear Functions and Direct Variation
8.2.4.A	analyze the nature of changes (including slope and intercepts) in quantities in linear relationships	HA1-402 MPA-135	Translating Among Multiple Representations of Functions Determining the Slope of a Line
		MPA-140	Examining Linear Equations in Slope-Intercept Form
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time
		HA1-442	Interpreting Graphs of Functions in Real-Life Situations
		MPA-142	Solving Problems With Linear Functions and Direct Variation
8.3	GEOMETRIC AND SPATIAL RELATIONSHIPS		
8.3.1.A	*describe, classify and generalize relationships between and among types of a) 2-dimensional objects and b) 3- dimensional objects using their defining <u>properties</u> including Pythagorean Theorem	MPA-058	Identifying Polygons
		MPA-059	Properties of Triangles and Quadrilaterals
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
		MPA-060	Determining Which Figures Tessellate
		MPA-072	Identifying 3-D Figures
		MPA-106	Identifying a Solid Figure From a Net
		MPA-066	Solving Problems Using the Pythagorean Theorem
8.3.2.A	use coordinate geometry to analyze <u>properties of right triangles</u> and quadrilaterals (including the use of the Pythagorean Theorem)	MPA-160	Plotting Polygons and Finding the Area
		MPA-066	Solving Problems Using the Pythagorean Theorem
8.3.3.A	reposition shapes under <u>formal</u> transformations such as reflection, rotation and translation	MPA-108	Graphing Translations and Reflections on the Coordinate Plane
		MPA-180	Examining Line and Rotational Symmetry
8.3.3.B	describe the relationship between the scale factor and the area of the image using a <u>dilation</u> (stretching/shrinking)	MPA-120	Applying Dilations in the Coordinate Plane
8.3.3.C	*identify the number of rotational symmetries of regular polygons	MPA-180	Examining Line and Rotational Symmetry
8.3.4.A	create <u>isometric drawings</u> from a given <u>net plan</u>	HA1-893	Constructing Solids from Different Perspectives
		MPA-106	Identifying a Solid Figure From a Net
8.3.4.B	draw or use <u>visual models</u> to represent and solve problems	MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
		MPA-115	Finding the Volumes of Prisms, Cylinders, Pyramids, and Cones Using Models
		MPA-180	Examining Line and Rotational Symmetry
		MPA-072	Identifying 3-D Figures
		MPA-060	Determining Which Figures Tessellate
8.4	MEASUREMENT		
8.4.2.B	solve problems of angle measure, including those involving triangles and parallel lines cut by a transversal	MPA-057	Identifying and Applying Supplementary and Complementary Angles
		MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
8.4.2.D	analyze <u>precision</u> and accuracy in measurement situations and determine number of significant digits	MPA-134	Calculating with Precision, Accuracy, and Significant Digits
8.5	DATA AND PROBABILITY		
8.5.1.C	select, create and use appropriate graphical representation of data (including <u>scatter plots</u>) and <u>box plots</u> (box and whiskers)	MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs
		MPA-129	Choosing Appropriate Scales and Intervals for Data
		MPA-094	Interpreting and Constructing Line Plots

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		MPA-096	Constructing Stem-and-Leaf Plots
		MPA-097	Constructing Box-and-Whisker Plots
		MPA-836	Using Measures of Variation
		MPA-131	Interpreting and Creating Histograms
		MPA-132	Interpreting and Creating Scatterplots
		MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
		MPA-099	Recognizing Misleading Statistics and Graphs
		MPA-840	Interpreting Data
8.5.2.A	find, use and interpret <u>measures of center</u> , <u>outliers</u> , and spread, including range and <u>interquartile range</u>	MPA-835	Using Measures of Central Tendency
		MPA-836	Using Measures of Variation
		HA1-540	Finding the Mean, Median, and Mode from Data and Frequency Distribution Tables
		HA1-541	Analyzing Data Using the Measures of Central Tendency and the Range
		MPA-097	Constructing Box-and-Whisker Plots
8.5.2.B	compare different representations of the same data and evaluate how well each representation shows important aspects of the data	MPA-840	Interpreting Data
		MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
		MPA-099	Recognizing Misleading Statistics and Graphs
8.5.3.A	make <u>conjectures</u> about possible relationships between 2 characteristics of a sample on the basis of scatter plots of the data and approximate lines of fit	MPA-132	Interpreting and Creating Scatterplots
		HA1-965	Determining the Best-Fitting Line

* - indicates that the expectation should be assessed at the local level.

MM1-Fundamentals of Mathematics

MPA-Pre-Algebra

HA1-Algebra 1

Note: Standards were taken from the Missouri Grade-Level Expectations document, Version 2.0 adopted by the Missouri State Board of Education in March 2007 and updated April, 2008.