



Pre-Algebra Correlation to Core Curriculum

	Core Curriculum for Pre-Algebra	I CAN Learn [®] Lesson #	I CAN Learn [®] Lesson Title
NUMBER AND OPERATIONS			
1.1.a	Compute fluently using all four operations with integers, and explain why the corresponding algorithms work.	MPA-053	Adding, Subtracting, Multiplying, and Dividing Integers
1.1.b	Compute fluently using all four operations with rational numbers, including negative fractions and decimals, and explain why the corresponding algorithms work.	HA1-062	Adding, Subtracting, Multiplying, and Dividing Real Numbers
1.1.c	Check the reasonableness of results using estimation.	Throughout	
1.2.a	Order rational numbers in various forms, including scientific notation (positive and negative exponents), and place numbers on a number line.	HA1-025	Comparing and Ordering Real Numbers
		HA1-235	Writing, Multiplying, and Dividing Numbers Written in Scientific Notation
1.2.b	Predict the effect of operating with fractions, decimals, percents, and integers as an increase or a decrease of the original value.	Throughout	
1.2.c	Recognize and use the identity properties of addition and multiplication, the multiplicative property of zero, the commutative and associative properties of addition and multiplication, and the distributive property of multiplication over addition.	HA1-085	Simplifying Expressions Using the Properties of Real Numbers
1.2.d	Recognize and use the inverse operations of adding and subtracting a fixed number, multiplying and dividing by a fixed number, and computing squares of whole numbers and taking square roots of perfect squares.	HA1-115	Using the Addition and Subtraction Properties for Equations
		HA1-120	Using the Multiplication and Division Properties for Equations
		HA1-124	Using a Concrete Model to Solve One- and Two-Step Equations
		HA1-125	Solving Equations Using More Than One Property
		MPA-013	Using Powers and Exponents in Expressions
		MPA-064	Finding Square Roots of Perfect Squares
1.3.a	Recognize the absolute value of a rational number as its distance from zero.	MPA-044	Finding Opposite and Absolute Values of Integers
1.3.b	Simplify numerical expressions, including those with whole number exponents and absolute values, using the order of operations.	HA1-060	Evaluating Numerical Expressions Using the Order of Operations
		HA1-030	Using Opposites and Absolute Values
		HA1-065	Evaluating Expressions Containing Exponents
1.3.c	Solve problems involving rational numbers, percents, and proportions.		Objective demonstrated throughout program. For examples see:
		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-088	Solving Real-World Problems Involving Percent
		HA1-360	Expressing Ratios in Simplest Form and Solving Equations Involving Proportions
PROPORTIONAL REASONING			
2.1.a	Compare ratios to determine if they are equivalent.	MPA-078	Expressing Ratios as Fractions and Determining Equivalency

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2.1.b	Compare ratios using the unit rate.	MPA-079	Unit rates
2.1.c	Represent percents as ratios based on 100 and decimals as ratios based on powers of ten.	MPA-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
2.1.d	Graph proportional relationships and identify the unit rate as the slope of the related line.	MPA-140	Examining Linear Equations in Slope-Intercept Form
2.2.a	Set up and solve problems involving proportional reasoning using variables.	MPA-080	Solving Proportions
2.2.b	Solve percent problems, including problems involving discounts, interest, taxes, tips, and percent increase or decrease.	MPA-126	Solving Real-World Problems Involving Sales Tax
		MPA-127	Solving Real-World Problems Involving Discounts
		MPA-128	Solving Real-World Problems Involving Simple Interest
		MPA-088	Solving Real-World Problems Involving Percent
2.2.c	Solve ratio and rate problems using informal methods.	MPA-155	Comparing and Converting Rates
2.3.a	Define similar polygons as polygons with corresponding angles congruent and corresponding sides that are proportional.	MPA-121	Identifying Similar and Congruent Polygons Using Proportions
2.3.b	Identify pairs of similar triangles using two pairs of congruent angles, or two pairs of proportional sides with congruent included angles.	MPA-121	Identifying Similar and Congruent Polygons Using Proportions
		MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
2.3.c	Find missing lengths of similar triangles, including inaccessible lengths, using proportions.	MPA-121	Identifying Similar and Congruent Polygons Using Proportions
		MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
2.3.d	Define the slope of a line as the ratio of the vertical change to the horizontal change between two points, and show that the slope is constant using similarity of right triangles.	MPA-140	Examining Linear Equations in Slope-Intercept Form
ALGEBRA			
3.1.a	Compare representations of a relation using tables, graphs, algebraic symbols, and mathematical rules.	MPA-103	Distinguishing Between Relations and Functions
3.1.b	Describe simple patterns using a mathematical rule or algebraic expression.	MPA-104	Recognizing Patterns
		MPA-270	Generating Algebraic Expressions from Patterns of Models
3.1.c	Create and extend simple numerical and visual patterns.	MPA-104	Recognizing Patterns
		MPA-270	Generating Algebraic Expressions from Patterns of Models
3.2.a	Evaluate algebraic expressions, including those with whole number exponents, when given values for the whole number exponents, when given values for the variable(s).	HA1-005	Evaluating Algebraic Expressions
		HA1-065	Evaluating Expressions Containing Exponents
		HA1-070	Evaluating Formulas for Given Values of the Variables
3.2.b	Simplify algebraic expressions using the order of operations, algebraic properties, and exponent rules.	HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-065	Evaluating Expressions Containing Exponents
		HA1-860	Using the Laws of Exponents
		HA1-815	Simplifying Expressions with Negative and Zero Exponents
		HA1-818	Simplifying Expressions Using the Division Properties of Exponents
3.2.c	Solve single-variable linear equations and inequalities, including those that must be simplified on one side or those with variables on both sides of an equation.	HA1-104	Translating Word Statements into Equations
		HA1-115	Using the Addition and Subtraction Properties for Equations
		HA1-120	Using the Multiplication and Division Properties for Equations
		HA1-124	Using a Concrete Model to Solve One- and Two-Step Equations
		HA1-125	Solving Equations Using More Than One Property
		HA1-140	Solving Equations by Combining Like Terms

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		HA1-144	Using a Concrete Model to Solve Equations with Variables on Both Sides
		HA1-145	Solving Equations with Variables on Both Sides
		HA1-382	Solving Linear Equations Using the Graphing Calculator
		HA1-105	Translating Word Statements into Inequalities
		HA1-185	Solving Inequalities Using the Addition and Subtraction Properties
		HA1-190	Solving Inequalities Using the Multiplication and Division Properties
		HA1-195	Solving Inequalities Using More Than One Property
3.3.a	Identify approximate rational coordinates when given the graph of a point on a rectangular coordinate system.	HA1-370	Graphing Ordered Pairs on a Coordinate Plane
3.3.b	Graph ordered pairs of rational numbers on a rectangular coordinate system.	HA1-370	Graphing Ordered Pairs on a Coordinate Plane
3.3.c	Graph linear equations using ordered pairs or tables.	HA1-380	Graphing Linear Equations
3.3.d	Recognize that all first order equations produce linear graphs.	HA1-380	Graphing Linear Equations
3.3.e	Model real-world problems using graphs, tables, equations, manipulatives, and pictures, and identify extraneous information.	MPA-142	Solving Problems With Linear Functions and Direct Variation
		MPA-150	Identifying and Graphing Linear and Nonlinear Functions
		MPA-125	Formulating a Possible Problem Situation Given an Equation
		HA1-402	Translating Among Multiple Representations of Functions
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time
		MM1-195	Identifying the Mathematical Question Given in a Word Problem
MEASUREMENT AND GEOMETRY			
4.1.a	Convert units of measure within the same system.	MPA-155	Comparing and Converting Rates
4.1.b	Create and interpret scale drawings and approximate distance on maps using scale factors.	MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
4.1.c	Solve problems using scale factors.	MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
		MPA-120	Applying Dilations in the Coordinate Plane
4.2.a	Derive formulas for and calculate surface area and volume of right prisms and cylinders using appropriate units.	HA1-890	Using Models to Derive Formulas for Two-Dimensional Geometric Figures
		HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
4.2.b	Explain that if a scale factor describes how corresponding lengths in two similar objects are related, then the square of the scale factor describes how corresponding areas are related and the cube of the scale factor describes how corresponding volumes are related.	MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
4.2.c	Find lengths, areas, and volumes of similar figures, using the scale factor.	MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
4.2.d	Select appropriate two- and three-dimensional figures to model real-world objects, and solve a variety of problems involving surface areas and volumes of cylinders and prisms.	MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
DATA ANALYSIS AND PROBABILITY			
5.1.a	Solve counting problems using the Fundamental Counting Principle.	HA1-879	Applying Counting Techniques to Permutations and Combinations
5.1.b	Calculate the probability of an event or sequence of events with and without replacement using models.	MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
5.1.c	Recognize that the sum of the probability of an event and the probability of its complement is equal to one.	MPA-113	Finding the Probability of Compound Events Through Experimentation
5.1.d	Make approximate predictions using theoretical probability and proportions.	MPA-114	Finding the Odds of Events and Experimental Probability from a Math Model
5.1.e	Collect and interpret data to show that as the number of trials increases, experimental probability approaches the theoretical probability.	MPA-114	Finding the Odds of Events and Experimental Probability from a Math Model
5.2.a	Formulate questions that can be answered through data collection and analysis.	MPA-840	Interpreting Data
5.2.b	Determine the 25th and 75th percentiles (first and third quartiles) to obtain	MPA-097	Constructing Box-and-Whisker Plots

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	information about the spread of data.		
5.2.c	Graphically summarize data of a single variable using histograms and box-and whisker plots.	MPA-131	Interpreting and Creating Histograms
		MPA-097	Constructing Box-and-Whisker Plots
5.2.d	Compute the mean and median of a numerical characteristic and relate these values to the histogram of the data.	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
5.2.e	Use graphical representations and numerical summaries to answer questions and interpret data.	MPA-840	Interpreting Data

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

Note: Standards were taken from the Utah Secondary Mathematics Core Curriculum document adopted by the Utah State Board of Education in 2007.