



## Algebra I Correlation to Core Curriculum

	Core Curriculum for Algebra I	I CAN Learn <sup>®</sup> Lesson #	I CAN Learn <sup>®</sup> Lesson Title
<b>NUMBER AND OPERATIONS</b>			
1.1.a	Define a rational number as a point on the number line that can be expressed as the ratio of two integers, and points that cannot be so expressed as irrational.	HA1-015	Graphing Real Numbers Using a Number Line
1.1.b	Classify numbers as rational or irrational, knowing that rational numbers can be expressed as terminating or repeating decimals and irrational numbers can be expressed as non-terminating, non-repeating decimals.	HA1-020	Classifying Numbers into Subsets of Real Numbers
1.1.c	Classify pi and square roots of non-perfect square numbers as irrational.	HA1-020	Classifying Numbers into Subsets of Real Numbers
		MPA-124	Classifying Numbers in the Real Number System
1.1.d	Place rational and irrational numbers on a number line between two integers.	HA1-015	Graphing Real Numbers Using a Number Line
		MPA-065	Estimating Square Roots
1.2.a	Simplify, add, subtract, multiply, and divide expressions with square roots.	HA1-490	Simplifying Square Roots
		HA1-495	Simplifying Sums and Differences of Radicals
		HA1-500	Simplifying Products of Radicals
		HA1-505	Simplifying Quotients of Radicals
1.2.b	Evaluate and simplify numerical expressions containing rational numbers and square roots using the order of operations.	HA1-060	Evaluating Numerical Expressions Using the Order of Operations
		HA1-495	Simplifying Sums and Differences of Radicals
		HA1-500	Simplifying Products of Radicals
1.2.c	Compute solutions to problems, represent answers in exact form, and determine the reasonableness of answers.	Throughout	
1.2.d	Calculate the measures of the sides of a right triangle using the Pythagorean Theorem.	HA1-515	Using the Pythagorean Theorem
		HA1-516	Applications of the Pythagorean Theorem
<b>ALGEBRA AND FUNCTIONS</b>			
2.1.a	Identify the slope of a line when given points, a graph, or an equation.	HA1-385	Finding the Slope of a Line from its Graph or from the Coordinates of Two Points
		HA1-398	Graphing Linear Equations Using Slope and y-Intercept or Slope and a Point
2.1.b	Identify horizontal and vertical lines given the equations or slopes.	HA1-385	Finding the Slope of a Line from its Graph or from the Coordinates of Two Points
		HA1-398	Graphing Linear Equations Using Slope and y-Intercept or Slope and a Point
2.1.c	Determine the effect of changes in slope or y-intercept in $y = mx + b$ .	HA1-401	How Variations of "m" and "b" Affect the Graph of $y = mx + b$
2.1.d	Determine and explain the meaning of slopes and intercepts using real-world examples.	MPA-142	Solving Problems With Linear Functions
		HA1-402	Translating Among Multiple Representations of Functions
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time
		HA1-442	Interpreting Graphs of Functions in Real-Life Situations
2.2.a	Write algebraic expressions or equations to generalize visual patterns, numerical patterns, relations, data sets, or scatter plots.	HA1-447	Identifying Number Patterns

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		HA1-448	Finding the nth Term of a Pattern
		HA1-436	Identifying Relations
		HA1-892	Data Analysis Using the Graphing Calculator
		HA1-965	Determining the Best-Fitting Line
2.2.b	Represent linear equations in slope-intercept form, $y = mx + b$ , and standard form, $Ax + By = C$ .	HA1-394	Interchanging Linear Equations Between Standard Form and Slope-Intercept Form
2.2.c	Distinguish between linear and non-linear functions by examining a table, equation, or graph.	MPA-150	Identifying and Graphing Linear and Nonlinear Functions
		HA1-892	Data Analysis Using the Graphing Calculator
2.2.d	Interpret the slope of a linear function as a rate of change in real-world situations.	MPA-142	Solving Problems With Linear Functions
		HA1-402	Translating Among Multiple Representations of Functions
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time
		HA1-442	Interpreting Graphs of Functions in Real-Life Situations
		HA1-955	Analyzing Linear Functions
		HA1-960	Real-World Applications of Linear Functions
2.3.a	Write the equation of a line when given two points or the slope and a point on the line.	HA1-405	Determining an Equation of a Line Given the Slope and Coordinates of One Point
		HA1-410	Determining an Equation of a Line Given the Coordinates of Two Points
2.3.b	Approximate the equation of a line given the graph of a line.	HA1-395	Finding the Equation of a Line Parallel or Perpendicular to a Given Line
2.3.c	Identify the x- and y-intercepts from an equation or graph of a line or a table of values.	MPA-140	Examining Linear Equations in Slope-Intercept Form
		HA1-398	Graphing Linear Equations Using Slope and y-Intercept or Slope and a Point
		HA1-401	How Variations of "m" and "b" Affect the Graph of $y = mx + b$
		HA1-402	Translating Among Multiple Representations of Functions
2.3.d	Graph linear relations and inequalities by plotting points, by finding x- and y intercepts, or by using the slope and any point on the line.	HA1-380	Graphing Linear Equations
		HA1-398	Graphing Linear Equations Using Slope and y-Intercept or Slope and a Point
		HA1-415	Graphing Linear Inequalities with Two Variables
		HA1-416	Graphing Linear Inequalities with Two Variables Using the Graphing Calculator
<b>ALGEBRAIC RELATIONSHIPS</b>			
3.1.a	Simplify and evaluate monomial expressions and formulas.	HA1-220	Identifying and Multiplying Monomials
		HA1-135	Evaluating Formulas
3.1.b	Add and subtract polynomials.	HA1-245	Adding and Subtracting Polynomials
3.1.c	Multiply monomials by a polynomial.	HA1-920	Simplifying Algebraic Expressions Using the Distributive Property
3.1.d	Multiply binomials.	HA1-255	Multiplying Two Binomials Using the FOIL Method
		HA1-260	Squaring a Binomial and Finding the Product of a Sum and Difference
3.1.e	Simplify the quotient of monomials using positive exponents.	HA1-225	Dividing Monomials and Simplifying Expressions Having an Exponent of Zero
		HA1-230	Raising a Monomial or Quotient of Monomials to a Power
3.2.a	Solve single-variable linear equations and inequalities algebraically and graphically.	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
		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
		HA1-150	Writing an Equation to Solve Word Problems
		HA1-180	Graphing Equations and Inequalities on the Number Line
		HA1-185	Solving Inequalities Using the Addition and Subtraction Properties

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		HA1-190	Solving Inequalities Using the Multiplication and Division Properties
		HA1-195	Solving Inequalities Using More Than One Property
3.2.b	Solve real-world problems involving constant rates of change.	HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time
		HA1-442	Interpreting Graphs of Functions in Real-Life Situations
3.2.c	Solve equations for a specified variable.	HA1-175	Solving Literal Equations
3.2.d	Solve proportions that include algebraic first-degree expressions.	HA1-360	Expressing Ratios in Simplest Form and Solving Equations Involving Proportions
3.3.a	Solve systems of two linear equations graphically and algebraically with and without technology.	HA1-455	Solving Systems of Linear Equations by Graphing
		HA1-460	Solving Systems of Linear Equations by the Substitution Method
		HA1-465	Solving Systems of Linear Equations by the Addition/Subtraction Method
		HA1-470	Solving Systems of Linear Equations by the Multiply/Add/Subtract Method
		HA1-806	Solving Systems of Linear Equations Using the Graphing Calculator
3.3.b	Determine the number of possible solutions for a system of two linear equations.	HA1-455	Solving Systems of Linear Equations by Graphing
3.3.c	Graph a system of linear inequalities and identify the solution.	HA1-475	Graphing the Solution Set of a System of Linear Inequalities
3.4.a	Find the greatest common monomial factor of a polynomial.	HA1-270	Factoring the Greatest Common Monomial Factor from a Polynomial
3.4.b	Factor trinomials with integer coefficients of the form $x^2 + bx + c$ .	HA1-271	Factoring Trinomials and the Differences of Squares Using Algebra Tiles
		HA1-275	Factoring the Difference Between Two Squares and Perfect Square Trinomials
		HA1-276	Factoring Sums and Differences of Cubes
		HA1-280	Factoring $x^2 + bx + c$ When $c$ is Greater Than Zero
		HA1-285	Factoring $x^2 + bx + c$ When $c$ is Less Than Zero
3.4.c	Factor the difference of two squares and perfect square trinomials.	HA1-275	Factoring the Difference Between Two Squares and Perfect Square Trinomials
3.5.a	Solve quadratic equations that can be simplified to the form $x^2 = a$ where $a \geq 0$ by taking square roots.	HA1-525	Solving Quadratic Equations Involving Perfect Square Expressions
3.5.b	Solve quadratic equations using factoring.	HA1-536	Solving Quadratic Equations Using the Graphing Calculator
		HA1-305	Solving Polynomial Equations by Factoring
3.5.c	Write a quadratic equation when given the solutions.	HA1-536	Solving Quadratic Equations Using the Graphing Calculator
<b>DATA ANALYSIS</b>			
4.1.a	Collect, record, organize, and display a set of data with at least two variables.	HA1-885	Histograms and the Normal Distribution
4.1.b	Determine whether the relationship between two variables is approximately linear or non-linear by examination of a scatter plot.	HA1-965	Determining the Best-Fitting Line
4.1.c	Characterize the relationship between two linear related variables as having positive, negative, or approximately zero correlation.	HA1-965	Determining the Best-Fitting Line
4.2.a	Estimate the equation of a line of best fit to make and test conjectures.	HA1-877	Drawing Inferences and Making Predictions from Tables and Graphs
4.2.b	Interpret the slope and y-intercept of a line through data.	HA1-877	Drawing Inferences and Making Predictions from Tables and Graphs
4.2.c	Predict y-values for given x-values when appropriate using a line fitted to bivariate numerical data.	HA1-877	Drawing Inferences and Making Predictions from Tables and Graphs

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.