



## Algebra I Correlation to EOCEP Standards

	Course Standards for Algebra EOCEP	I CAN Learn® Lesson #	I CAN Learn® Lesson Title
<b>Standard EA-1:</b>			
EA-1.1	Communicate a knowledge of algebraic relationships by using mathematical terminology appropriately.	Throughout	Process standards are embedded throughout the courseware.
EA-1.2	Connect algebra with other branches of mathematics.	Throughout	Process standards are embedded throughout the courseware.
EA-1.3	Apply algebraic methods to solve problems in real-world contexts.	Throughout	Process standards are embedded throughout the courseware.
EA-1.4	Judge the reasonableness of mathematical solutions.	Throughout	Process standards are embedded throughout the courseware.
EA-1.5	Demonstrate an understanding of algebraic relationships by using a variety of representations (including verbal, graphic, numerical, and symbolic).	Throughout	Process standards are embedded throughout the courseware.
EA-1.6	Understand how algebraic relationships can be represented in concrete models, pictorial models, and diagrams.	Throughout	Process standards are embedded throughout the courseware.
EA-1.7	Understand how to represent algebraic relationships by using tools such as handheld computing devices, spreadsheets, and computer algebra systems (CASs).	Throughout	Process standards are embedded throughout the courseware.
<b>Standard EA-2:</b>			
EA-2.1	Exemplify elements of the real number system (including integers, rational numbers, and irrational numbers).	HA1-130	Identifying Postulates, Theorems, and Properties
		HA1-015	Graphing Real Numbers Using a Number Line
		HA1-062	Adding, Subtracting, Multiplying, and Dividing Real Numbers
EA-2.2	Apply the laws of exponents and roots to solve problems.	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
		HA1-065	Evaluating Expressions Containing Exponents
		HA1-480	Finding the Square Roots of Rational Numbers
		HA1-490	Simplifying Square Roots
EA-2.3	Carry out a procedure to perform operations (including multiplication and division) with numbers written in scientific notation.	HA1-235	Writing, Multiplying, and Dividing Numbers Written in Scientific Notation
EA-2.4	Use dimensional analysis to convert units of measure within a system.	MPA-155	Comparing and Converting Rates
EA-2.5	Carry out a procedure using the properties of real numbers (including commutative, associative, and distributive) to simplify expressions.	HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-076	Basic Distributive Property
		HA1-079	Using a Concrete Model to Simplify Algebraic Expressions
		HA1-090	Simplifying Expressions Using the Property of -1
		HA1-080	Simplifying and Evaluating Algebraic Expressions Containing Grouping Symbols
EA-2.6	Carry out a procedure to evaluate an expression by substituting a value for the variable.	HA1-005	Evaluating Algebraic Expressions
		HA1-065	Evaluating Expressions Containing Exponents

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EA-2.7	Carry out a procedure (including addition, subtraction, multiplication, and division by a monomial) to simplify polynomial expressions.	HA1-095	Translating Word Phrases into Algebraic Expressions
		HA1-220	Identifying and Multiplying Monomials
		HA1-225	Dividing Monomials and Simplifying Expressions Having an Exponent of Zero
		HA1-230	Raising a Monomial or Quotient of Monomials to a Power
		HA1-240	Identifying the Degree of Polynomials and Simplifying by Combining Like Terms
		HA1-245	Adding and Subtracting Polynomials
		HA1-920	Simplifying Algebraic Expressions Using the Distributive Property
		HA1-255	Multiplying Two Binomials Using the FOIL Method
		HA1-260	Squaring a Binomial and Finding the Product of a Sum and Difference
		MPA-118	Modeling Integer Arithmetic Using Algebra Tiles
EA-2.8	Carry out a procedure to factor binomials, trinomials, and polynomials by using various techniques (including the greatest common factor, the difference between two squares, and quadratic trinomials).	HA1-270	Factoring the Greatest Common Monomial Factor from a Polynomial
		HA1-271	Factoring Trinomials and the Differences of Squares Using Algebra Tiles
		HA1-275	Factoring the Difference Between Two Squares and Perfect Square Trinomials
		HA1-280	Factoring $x^2 + bx + c$ When $c$ is Greater Than Zero
		HA1-285	Factoring $x^2 + bx + c$ When $c$ is Less Than Zero
		HA1-290	Factoring $ax^2 + bx + c$
		HA1-291	Factoring Quadratic Equations Using the Graphing Calculator
EA-2.9	Carry out a procedure to perform operations with matrices (including addition, subtraction, and scalar multiplication).	HA1-845	Operations with Matrices
EA-2.10	Represent applied problems by using matrices.	HA1-840	Introduction to Matrices
		HA1-845	Operations with Matrices
<b>Standard EA-3:</b>			
EA-3.1	Classify a relationship as being either a function or not a function when given data as a table, set of ordered pairs, or graph.	HA1-436	Identifying Relations
EA-3.2	Use function notation to represent functional relationships.	HA1-437	Identifying Relations as Functions
		HA1-439	Using Function Notation
EA-3.3	Carry out a procedure to evaluate a function for a given element in the domain.	HA1-438	Finding the Domain and Range of Functions
EA-3.4	Analyze the graph of a continuous function to determine the domain and range of the function.	HA1-438	Finding the Domain and Range of Functions
EA-3.5	Carry out a procedure to graph parent functions (including $y = x$ , $y = x^2$ , $y = \sqrt{x}$ , $y = \text{abs}(x)$ , $y = 1/x$	HA1-380	Graphing Linear Equations
		HA1-955	Analyzing Linear Functions
		HA1-536	Solving Quadratic Equations Using the Graphing Calculator
		HA1-935	Analyzing Graphs of Quadratic Functions
		HA1-950	Graphing Absolute Value Functions
		HA1-450	Solving Problems Involving Direct Variation
		HA1-453	Solving Problems Involving Inverse Variation
EA-3.6	Classify a variation as either direct or inverse.	HA1-175	Solving Literal Equations
		HA1-450	Solving Problems Involving Direct Variation
EA-3.7	Carry out a procedure to solve literal equations for a specified variable.	HA1-453	Solving Problems Involving Inverse Variation
EA-3.8	Apply proportional reasoning to solve problems.	HA1-160	Writing an Equation to Solve Distance, Rate, and Time Problems
<b>Standard EA-4:</b>			
EA-4.1	Carry out a procedure to write an equation of a line with a given slope and a y-intercept.	HA1-380	Graphing Linear Equations
EA-4.2	Carry out a procedure to write an equation of a line with a given slope passing through a given point.	HA1-405	Determining an Equation of a Line Given the Slope and Coordinates of One Point

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EA-4.3	Carry out a procedure to write an equation of a line passing through two given points.	HA1-410	Determining an Equation of a Line Given the Coordinates of Two Points
EA-4.4	Use a procedure to write an equation of a trend line from a given scatterplot.	HA1-965	Determining the Best-Fitting Line
EA-4.5	Analyze a scatterplot to make predictions.	HA1-965	Determining the Best-Fitting Line
EA-4.6	Represent linear equations in multiple forms (including point-slope, slope-intercept, and standard).	HA1-394	Interchanging Linear Equations Between Standard Form and Slope-Intercept Form
		HA1-395	Finding the Equation of a Line Parallel or Perpendicular to a Given Line
		HA1-398	Graphing Linear Equations Using Slope and y-Intercept or Slope and a Point
EA-4.7	Carry out procedures to solve linear equations for one variable algebraically.	HA1-115	Using the Addition and Subtraction Properties for Equations
		HA1-120	Using the Multiplication and Division Properties for Equations
		HA1-125	Solving Equations Using More Than One Property
		HA1-140	Solving Equations by Combining Like Terms
		HA1-145	Solving Equations with Variables on Both Sides
EA-4.8	Carry out procedures to solve linear inequalities for one variable algebraically and then to graph the solution.	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
		HA1-200	Combined Inequalities
		HA1-205	Solving Combined Inequalities
EA-4.9	Carry out a procedure to solve systems of two linear equations graphically.	HA1-455	Solving Systems of Linear Equations by Graphing
EA-4.10	Carry out a procedure to solve systems of two linear equations algebraically.	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
<b>Standard EA-5:</b>			
EA-5.1	Carry out a procedure to graph a line when given the equation of the line.	HA1-380	Graphing Linear Equations
EA-5.2	Analyze the effects of changes in the slope, $m$ , and the y-intercept, $b$ , on the graph of $y = mx + b$ .	HA1-401	How Variations of "m" and "b" Affect the Graph of $y = mx + b$
EA-5.3	Carry out a procedure to graph the line with a given slope and a y-intercept.	HA1-398	Graphing Linear Equations Using Slope and y-Intercept or Slope and a Point
EA-5.4	Carry out a procedure to graph the line with a given slope passing through a given point.	HA1-398	Graphing Linear Equations Using Slope and y-Intercept or Slope and a Point
EA-5.5	Carry out a procedure to determine the x-intercept and y-intercept of lines from data given tabularly, graphically, symbolically, and verbally.	HA1-402	Translating Among Multiple Representations of Functions
EA-5.6	Carry out a procedure to determine the slope of a line from data given tabularly, graphically, symbolically, and verbally.	HA1-442	Interpreting Graphs of Functions in Real-Life Situations
EA-5.7	Apply the concept of slope as a rate of change to solve problems.	HA1-955	Analyzing Linear Functions
		HA1-960	Real-World Applications of Linear Functions
EA-5.8	Analyze the equations of two lines to determine whether the lines are perpendicular or parallel.	HA1-395	Finding the Equation of a Line Parallel or Perpendicular to a Given Line
EA-5.9	Analyze given information to write a linear function that models a given problem situation.	HA1-960	Real-World Applications of Linear Functions
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time
		HA1-442	Interpreting Graphs of Functions in Real-Life Situations
EA-5.10	Analyze given information to determine the domain and range of a linear function in a problem situation.	HA1-960	Real-World Applications of Linear Functions
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time

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EA-5.11	Analyze given information to write a system of linear equations that models a given problem situation.	HA1-442 HA1-870	Interpreting Graphs of Functions in Real-Life Situations Solving Problems with Systems of Linear Equations and Inequalities
EA-5.12	Analyze given information to write a linear inequality in one variable that models a given problem situation.	HA1-870	Solving Problems with Systems of Linear Equations and Inequalities
EA-6.1	Analyze the effects of changing the leading coefficient $a$ on the graph of $y=ax^2$	HA1-416 HA1-927	Graphing Linear Inequalities with Two Variables Using the Graphing Calculator Graphing $f(x) = ax^2$ Using Dilations
EA-6.2	Analyze the effects of changing the constant $c$ on the graph of $y=ax^2 + c$	HA1-928	Graphing $f(x) = ax^2$ Using Dilations and Reflections
EA-6.3	Analyze the graph of a quadratic function to determine its equation.	HA1-929	Graphing $f(x) = ax^2 + c$ Using Dilations, Reflections, and Vertical Translations
EA-6.4	Carry out a procedure to solve quadratic equations by factoring.	HA1-935	Analyzing Graphs of Quadratic Functions
		HA1-305	Solving Polynomial Equations by Factoring
		HA1-310	The Practical Use of Polynomial Equations
EA-6.5	Carry out a graphic procedure to approximate the solutions of quadratic equations.	HA1-536	Solving Quadratic Equations Using the Graphing Calculator
EA-6.6	Analyze given information to determine the domain of a quadratic function in a problem situation.	HA1-940	Applications of Quadratic Equations
		HA1-945	Real-World Applications of Quadratic Functions

MPA- Pre-Algebra  
HA1-Algebra 1

Note: Standards were taken from the South Carolina Mathematics Curriculum 2007 document adopted by the South Carolina State Board of Education in July 2007.