



Algebra I Mathematics Curriculum Framework

	2007 Mathematics Curriculum Framework	I CAN Learn® Lesson Number	I CAN Learn® Lesson Title
NUMBER AND OPERATIONS			
1.a.	Apply properties of real numbers to simplify algebraic expressions, including polynomials. (DOK 1)	HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
		HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-079	Using a Concrete Model to Simplify Algebraic Expressions
		HA1-080	Simplifying and Evaluating Algebraic Expressions Containing Grouping Symbols
		HA1-090	Simplifying Expressions Using the Property of -1
1.b.	Use matrices to solve mathematical situations and contextual problems. (DOK 2)	HA1-840	Introduction to Matrices
		HA1-845	Operations with Matrices
ALGEBRA			
2.a.	Solve, check, and graph multi-step linear equations and inequalities in one variable, including rational coefficients in mathematical and real-world situations. (DOK 2)	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
		HA1-360	Expressing Ratios in Simplest Form and Solving Equations Involving Proportions
		HA1-150	Writing an Equation to Solve Word Problems
		HA1-160	Writing an Equation to Solve Distance, Rate, and Time Problems
		HA1-362	Solving Work Problems
		HA1-165	Using Equations to Solve Percent Problems
		HA1-170	Solving Percent of Change Problems
		HA1-180	Graphing Equations and Inequalities on the Number Line
		HA1-195	Solving Inequalities Using More Than One Property
		HA1-200	Combined Inequalities
		HA1-205	Solving Combined Inequalities
2.b.	Solve and graph absolute value equations and inequalities in one variable. (DOK 2)	HA1-210	Solving Equations Involving Absolute Value
		HA1-215	Solving Absolute Value Inequalities
2.c.	Analyze the relationship between x and y values, determine whether a relation is a function, and identify domain and range. (DOK 2)	HA1-436	Identifying Relations
		HA1-437	Identifying Relations as Functions
		HA1-438	Finding the Domain and Range of Functions
2.d.	Explain and illustrate how a change in one variable may result in a change in another variable and apply to the relationships between independent and dependent variables. (DOK 2)	HA1-438	Finding the Domain and Range of Functions
2.e.	Graph and analyze linear functions. (DOK 2)	HA1-380	Graphing Linear Equations

	2007 Mathematics Curriculum Framework	I CAN Learn® Lesson Number	I CAN Learn® Lesson Title
2.f.	Use algebraic and graphical methods to solve systems of linear equations and inequalities in mathematical and real-world situations. (DOK 2)	HA1-955	Analyzing Linear Functions
		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
		HA1-475	Graphing the Solution Set of a System of Linear Inequalities
2.g.	Add, subtract, multiply, and divide polynomial expressions. (DOK 1)	HA1-870	Solving Problems with Systems of Linear Equations and Inequalities
		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
2.h.	Factor polynomials by using Greatest Common Factor (GCF) and factor quadratics that have only rational roots. (DOK 1)	HA1-355	Dividing Polynomials
		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
		HA1-295	Factoring by Removing a Common Factor and Grouping
		HA1-300	Factoring a Polynomial Completely
2.i.	Determine the solutions to quadratic equations by using graphing, tables, completing the square, the Quadratic formula, and factoring. (DOK 1)	HA1-525	Solving Quadratic Equations Involving Perfect Square Expressions
		HA1-530	Solving Quadratic Equations by Completing the Square
		HA1-535	Developing the Quadratic Formula and Using it to Solve Equations
		HA1-536	Solving Quadratic Equations Using the Graphing Calculator
		HA1-935	Analyzing Graphs of Quadratic Functions
2.j.	Justify why some polynomials are prime over the rational number system. (DOK 2)	HA1-291	Factoring Quadratic Equations Using the Graphing Calculator
2.k.	Graph and analyze absolute value and quadratic functions. (DOK 2)	HA1-925	Using the Discriminant to Analyze the Solution of a Quadratic Equation
		HA1-950	Graphing Absolute Value Functions
		HA1-927	Graphing $f(x) = ax^2$ Using Dilations
		HA1-928	Graphing $f(x) = ax^2$ Using Dilations and Reflections
2.l.	Write, graph, and analyze inequalities in two variables. (DOK 2)	HA1-929	Graphing $f(x) = ax^2 + c$ Using Dilations, Reflections, and Vertical Translations
		HA1-415	Graphing Linear Inequalities with Two Variables
		HA1-416	Graphing Linear Inequalities with Two Variables Using the Graphing Calculator
GEOMETRY			
3.a.	Apply the concept of slope to determine if lines in a plane are parallel or perpendicular. (DOK 2)	HA1-385	Finding the Slope of a Line from its Graph or from the Coordinates of Two Points
3.b.	Solve problems that involve interpreting slope as a rate of change. (DOK 2)	MPA-142	Solving Problems With Linear Functions
MEASUREMENT			
4.a.	Solve real-world problems involving formulas for perimeter, area, distance, and rate. (DOK 2)	HA1-890	Using Models to Derive Formulas for Two-Dimensional Geometric Figures
		HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
		HA1-220	Identifying and Multiplying Monomials
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time

	2007 Mathematics Curriculum Framework	I CAN Learn® Lesson Number	I CAN Learn® Lesson Title
4.b.	Explain and apply the appropriate formula to determine length, midpoint, and slope of a segment in a coordinate plane. (i.e., distance formula, Pythagorean Theorem). (DOK 2)	HA1-520	Finding the Distance Between Two Points on a Coordinate Plane
		HA1-876	Applying Length, Midpoint and Slope of a Segment on a Cartesian Plane
4.c.	Represent polynomial operations with area models. (DOK 2)	HA1-220	Identifying and Multiplying Monomials
		HA1-890	Using Models to Derive Formulas for Two-Dimensional Geometric Figures
DATA ANALYSIS & PROBABILITY			
5.a.	Draw conclusions and make predictions from scatter plots. (DOK 3)	HA1-965	Determining the Best-Fitting Line
5.b.	b. Use linear regression to find the line-of-best fit from a given set of data. (DOK 3)	HA1-965	Determining the Best-Fitting Line
		HA1-892	Dividing Polynomials Using Factoring

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

Note: Standards were taken from the 2007 Mississippi Mathematics Framework Revised - Algebra I document adopted by the Mississippi State Board of Education in 2007.