



## Pre-Algebra Mathematics Curriculum Framework

	2007 Mathematics Curriculum Framework	I CAN Learn® Lesson Number	I CAN Learn® Lesson Title
<b>NUMBER AND OPERATIONS</b>			
1.a.	Define, classify, and order rational and irrational numbers and their subsets. (DOK 1)	MPA-124	Classifying Numbers in the Real Number System
1.b.	Formulate and solve standard and real-life problems involving addition, subtraction, multiplication, and division of rational numbers. (DOK 2)	Throughout	This standard appears throughout. For examples see:
		MPA-041	Writing Simple Algebraic Expressions from Phrases
		MPA-003	Using Four-Step Plan for Problem Solving
		MPA-116	Solving Real-Life Problems by Using Guess-and-Check and Working Backwards
		MPA-007	Solving Problems Using Logical Reasoning Skills
		MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
1.c.	Apply the concepts of Greatest Common Factor (GCF) and Least Common Multiple (LCM) to monomials with variables. (DOK 2)	HA1-270	Factoring the Greatest Common Monomial Factor from a Polynomial
		HA1-320	Simplifying Rational Expressions
		HA1-335	Finding the LCD of Rational Expressions and Changing Fractions to Equivalent Fractions
1.d.	Simplify and evaluate expressions using order of operations and use real number properties to justify solutions. (DOK 2)	HA1-003	Order of Operations
1.e.	Explain the rules of exponents related to multiplication and division of terms with exponents. (DOK 2)	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
1.f.	Recognize and appropriately use exponential and scientific notation. (DOK 1)	HA1-235	Writing, Multiplying, and Dividing Numbers Written in Scientific Notation
1.g.	Explain and use the inverse relationship between square roots and squares. (DOK 2)	MM1-565	Finding Squares and Square Roots
		HA1-480	Finding the Square Roots of Rational Numbers
<b>ALGEBRA</b>			
2.a.	Simplify and evaluate numerical and algebraic expressions. (DOK 1)	MPA-014	Evaluating Expressions for Given Variables
		HA1-005	Evaluating Algebraic Expressions
		HA1-060	Adding, Subtracting, Multiplying, and Dividing Real Numbers
		HA1-065	Evaluating Expressions Containing Exponents
2.b.	Apply properties of real numbers with an emphasis on the distributive properties of multiplication over addition and subtraction. (DOK 1)	HA1-085	Simplifying Expressions Using the Properties of Real Numbers
2.c.	Solve and check equations and inequalities using one variable. (DOK 2)	MPA-010	Solving One-Step Equations of Whole Numbers Using Addition and Subtraction
		MPA-011	Solving One-Step Equations of Whole Numbers Using Multiplication and Division
		MPA-012	Solving One-Step Equations of Whole Numbers Using All Operations
		MPA-054	Solving One-Step Equations with Integers Using all Four Operations
		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-040	Solving One-Step Equations with Decimals Using All Four Operations

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		MPA-100	Solving Two-Step Equations
		MPA-101	Solving Equations by Combining Like Terms
2.d.	Model inequalities (and their solutions) on a number line. (DOK 1)	HA1-180	Graphing Equations and Inequalities on the Number Line
2.e.	Graph linear equations and non-linear equations ( $y = x^2$ ) using multiple methods including t-tables and slope-intercept. (DOK 2)	MPA-140	Examining Linear Equations in Slope-Intercept Form
		MPA-150	Identifying and Graphing Linear and Nonlinear Functions
2.f.	Given a linear graph, identify its slope as positive, negative, undefined, or zero, and interpret slope as rate of change. (DOK 2)	MPA-140	Examining Linear Equations in Slope-Intercept Form
2.g.	Determine slope, x-intercept, and y-intercept from a graph and/or equation in slope-intercept or standard form. (DOK 1)	MPA-140	Examining Linear Equations in Slope-Intercept Form
2.h.	Add, subtract, and multiply monomials and binomials. (DOK 1)	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
		HA1-255	Multiplying Two Binomials Using the FOIL Method
		HA1-260	Squaring a Binomial and Finding the Product of a Sum and Difference
2.i.	Predict characteristics of a graph given an equation or t-table. (DOK 2)	MPA-142	Solving Problems With Linear Functions
<b>GEOMETRY</b>			
3.a.	Locate and identify angles formed by parallel lines cut by a transversal(s) (e.g., adjacent, vertical, complementary, supplementary, corresponding, alternate interior, and alternate exterior). (DOK 1)	MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
3.b.	Find missing angle measurements for parallel lines cut by a transversal(s) and for a vertex of a polygon. (DOK 1)	MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
		MPA-060	Determining Which Figures Tessellate
3.c.	Explain the Pythagorean Theorem and apply it to solve routine and non-routine problems. (DOK 3)	MPA-066	Solving Problems Using the Pythagorean Theorem
3.d.	Solve real-world and non-routine problems involving congruent and similar figures. (DOK 3)	MPA-121	Identifying Similar and Congruent Polygons Using Proportions
3.e.	Use two-dimensional representations (nets) of three-dimensional objects to describe objects from various perspectives. (DOK 2)	MPA-106	Identifying a Solid Figure From a Net
		HA1-893	Constructing Solids from Different Perspectives
<b>MEASUREMENT</b>			
4.a.	Solve real-world application problems that include length, area, perimeter, and circumference using standard measurements. (DOK 2)	MPA-055	Finding the Perimeter of a Figure
		MPA-067	Finding the Area of Rectangles and Parallelograms
		MPA-069	Finding the Area of Triangles and Trapezoids
		MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
4.b.	Develop, analyze, and explain methods for solving problems involving proportions, such as scaling and finding equivalent ratios. (DOK 3)	MPA-080	Solving Proportions
4.c.	Use formulas and/or appropriate measuring tools to find length and angle measures (to appropriate levels of precision), perimeter, area, volume, and surface area of polygons, circles, spheres, cones, pyramids, and composite or irregular figures. (DOK 1)	MM1-460	Measuring and Classifying Angles
		MPA-130	Developing a Sense of Relative Sizes of Measures
		MPA-134	Calculating with Precision, Accuracy, and Significant Digits
		HA1-890	Using Models to Derive Formulas for Two-Dimensional Geometric Figures
		HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
<b>DATA ANALYSIS &amp; PROBABILITY</b>			

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5.a.	Use a given mean, mode, median, and range to summarize and compare data sets including investigation of the different effects that change in data values have on these measures. (DOK 2)	MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs
5.b.	Select the appropriate measures of central tendency for a particular purpose. (DOK 2)	MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs
		HA1-541	Analyzing Data Using the Measures of Central Tendency and the Range
5.c.	Make and list conjectures by calculating probability for experimental or simulated contexts. (DOK 3)	MPA-090	Finding the Probability of Simple Real-Life Events
		MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
		MPA-113	Finding the Probability of Compound Events Through Experimentation
		MPA-114	Finding the Odds of Events and Experimental Probability from a Math Model
5.d.	Construct and interpret scatter plots to generalize trends from given data sets. (DOK 3)	MPA-132	Interpreting and Creating Scatterplots

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

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