



6th Grade Mathematics Curriculum Framework

	Mathematics Curriculum Framework	Lesson Number	Lesson Title
NUMBER AND OPERATIONS			
NO.1.6.1	Demonstrate conceptual understanding to find a specific percent of a number, using models, real life examples, or explanations	MM1-610	Finding Simple Interest
		MPA-084	Finding Percent Given Number and Total
		MPA-086	Solving Problems Using Percent
		MPA-088	Solving Real-World Problems Involving Percent
		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
NO.1.6.2	Find decimal and percent equivalents for proper fractions and explain why they represent the same value	MM1-365	Converting Decimals to Fractions and Fractions to Decimals
		MM1-375	Converting Fractions to Percents and Percents to Fractions
		MM1-380	Converting Fractions to Decimals and Percents
NO.1.6.3	Round and compare decimals to a given place value including thousandths	MM1-275	Comparing Decimal Numbers
		MM1-280	Identifying and Writing Decimals to the Hundredths and Thousandths
		MM1-285	Ordering Decimals According to the Tenths, Hundredths and Thousandths
		MM1-290	Rounding Decimals to the Nearest Whole Number
		MM1-295	Rounding Decimals to the Nearest Tenth, Hundredth and Thousandth
NO.1.6.4	Convert, compare and order fractions (mixed numbers and improper fractions) decimals and percents and find their approximate locations on a number line	MM1-110	Comparing and Ordering Fractions with Like Denominators
		MM1-125	Writing Mixed Numbers as Improper Fractions
		MM1-135	Comparing and Ordering Fractions with Like and Unlike Denominators
		MM1-275	Comparing Decimal Numbers
		MM1-285	Ordering Decimals According to the Tenths, Hundredths and Thousandths
		MM1-358	Converting Fractions and Mixed Numbers with Denominators of Powers of Ten to Decimals
		MM1-365	Converting Decimals to Fractions and Fractions to Decimals
		MM1-370	Converting Decimals to Percents and Percents to Decimals
		MM1-375	Converting Fractions to Percents and Percents to Fractions
		MM1-380	Converting Fractions to Decimals and Percents
		MPA-031	Comparing and Ordering Fractions and Decimals
NO.1.6.5	Recognize and identify perfect squares and their square roots	MM1-565	Finding Squares and Square Roots
NO.2.6.1	Use divisibility rules to determine if a number is a factor of another number (4, 6, 9)	MM1-088	Applying the Divisibility Rules for 2, 3, 4, 5, 6, 9 and 10
NO.2.6.2	Apply the distributive property of multiplication over addition to simplify computations with whole numbers	MM1-045	Identifying and Using Properties of Multiplication to Solve Problems
NO.2.6.3	Apply the addition, subtraction, multiplication and division properties of equality to one-step equations with whole numbers	MM1-625	Solving Algebraic Equations Using the Inverse Operations of Addition and Subtraction

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NO.2.6.4	Apply rules (conventions) for order of operations to whole numbers with and without parentheses	MM1-630	Solving Algebraic Equations Using the Inverse Operations of Multiplication and Division
		MM1-080	Identifying the Order of Operations Using Multiplication, Addition, and Subtraction
		MM1-085	Identifying the Order of Operations for Multiplication, Addition, and Subtraction Using Parentheses and Exponents
NO.2.6.5	Model multiplication and division of fractions (including mixed numbers) and decimals using pictures and physical objects, EX. weight, money and measuring cups	MPA-122	Modeling Multiplication and Division of Decimals
		MPA-123	Modeling Multiplication and Division of Fractions
NO.3.6.1	Apply, with and without appropriate technology, algorithms with computational fluency to perform whole number operations (+, -, x, /)	MM1-025	Identifying the Properties of Addition
		MM1-035	Adding Three or More Whole Numbers and Subtracting with Regrouping
		MM1-040	Using the Inverse Operations of Addition and Subtraction to Solve Problems Related to Number Sentences
		MM1-045	Identifying and Using Properties of Multiplication to Solve Problems
		MM1-050	Identifying Special Patterns in Multiplication
		MM1-055	Multiplying Whole Numbers with Two and Three Digits
		MM1-065	Solving Division in Three Forms
		MM1-075	Dividing with Remainders and Zeros in the Quotient
		MM1-080	Identifying the Order of Operations Using Multiplication, Addition, and Subtraction
		MM1-085	Identifying the Order of Operations for Multiplication, Addition, and Subtraction Using Parentheses and Exponents
		<i>Throughout</i>	
		MM1-145	Adding and Subtracting Fractions with Like and Unlike Denominators
		MM1-150	Adding Mixed Numbers with Like Denominators
		MM1-155	Subtracting Mixed Numbers with Like Denominators
		MM1-160	Adding and Subtracting Mixed Numbers with Unlike Denominators
MM1-165	Multiplying Fractions		
MM1-170	Multiplying Fractions by Simplifying the Problem		
MM1-175	Multiplying Mixed Numbers		
MM1-180	Dividing Fractions		
MM1-185	Dividing Mixed Numbers		
MM1-300	Adding and Subtracting Decimals		
MM1-310	Multiplying Decimals		
MM1-311	Using a One-Digit Divisor, Express the Remainder as a Decimal		
MM1-313	Using a Two-Digit Divisor, Express the Remainder as a Decimal		
MM1-315	Dividing Decimals by Whole Number Divisors		
MM1-320	Performing Mathematical Operations with Decimal Numbers in Application Problems		
MM1-325	Dividing with Decimal Divisors		
MM1-330	Dividing with a Decimal Divisor and Dividend		
MM1-335	Using Zeros as Placeholders when Dividing with Decimal Numbers in the Dividend		
NO.3.6.3	Solve, with and without appropriate technology, multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil)	<i>Throughout</i>	
		MM1-195	Identifying the Mathematical Question Given in a Word Problem
		MM1-355	Solving Multiple-Step Problems
		<i>Throughout</i>	
NO.3.6.4	Estimate reasonable solutions to problem situations involving fractions and decimals, EX. $7/8 + 12/13 \approx 2$; $4.23 \times 5.8 \approx 24$	MM1-305	Estimating Products by Rounding to the Nearest Whole Number
		MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation

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		MPA-017	Rounding Decimals and Estimating Computations Using Decimals
		MPA-033	Estimating Computations with Fractions and Mixed Numbers
NO.3.6.5	Find and use factorization (tree diagram) including prime factorization of composite numbers (expanded and exponential notation) to determine the greatest common factor (GCF) and least common multiple (LCM)	MM1-017	Identifying Exponential and Standard Form of a Number
		MM1-090	Identifying Prime and Composite Numbers
		MM1-095	Expressing a Number as a Product of Prime Numbers
		MM1-105	Identifying the Greatest Common Factor and the Least Common Multiple
NO.3.6.6	Use proportional reasoning and ratios to represent problem situations and determine the reasonableness of solutions with and without appropriate technology (Ex. unit rates)	MM1-215	Identifying a Rate to Solve Problems
		MM1-220	Writing and Forming Proportions
		MM1-225	Solving Proportions
NO.3.6.7	Determine the percent of a number and solve related problems in real world situations, EX. tip, sales tax, discounts, etc	MM1-610	Finding Simple Interest
		MPA-083	Finding Number Given Percent and Total
		MPA-086	Solving Problems Using Percent
		MPA-087	Finding Percent Increase and Decrease
		MPA-088	Solving Real-World Problems Involving Percent
		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
ALGEBRA			
A.4.6.1	Solve problems by finding the next term or missing term in a pattern or function table using real world situations	MM1-020	Identifying and Finding Number Patterns Using Whole Numbers
A.4.6.2	Interpret and write an algebraic rule for a one operation function table, EX. $y=x+3$		
A.5.6.1	Model, write and solve one-step equations by informal methods using manipulatives and appropriate technology	MM1-625	Solving Algebraic Equations Using the Inverse Operations of Addition and Subtraction
		MM1-630	Solving Algebraic Equations Using the Inverse Operations of Multiplication and Division
		MM1-640	Solving Algebraic Word Problems
A.5.6.2	Write simple algebraic expressions using appropriate operations (+, -, x, /) with one variable	MM1-600	Introducing Variables in Algebra
		MM1-615	Translating Words into Algebra
A.5.6.3	Evaluate algebraic expressions with one variable using appropriate properties and operations (+, -, x, /)	MM1-600	Introducing Variables in Algebra
A.6.6.1	Complete, with and without appropriate technology, and interpret tables and line graphs that represent the relationship between two variables in quadrant I, EX. time and distance	MM1-390	Understanding Data in Bar Graphs, Line Graphs, and Stem-and-Leaf Plots
		MM1-395	Analyzing Data in Line Graphs, Bar Graphs, Stem-and-Leaf Plots
		MM1-430	Using Graphs to Solve Story Problems
		MM1-642	Exploring the Coordinate Plane and Graphing Ordered Pairs
A.7.6.1	Identify and compare situations with constant or varying rates of change, EX. a student's rate of growth each year is a varying rate, hourly wages is a constant rate		
GEOMETRY			
G.8.6.1	Identify three-dimensional geometric figures using models (rectangular prisms, cylinders, cones, pyramids and spheres)	MPA-072	Identifying 3-D Figures
		MPA-106	Identifying a Solid Figure From a Net
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
G.8.6.2	Investigate with manipulatives or grid paper what happens to the	MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids

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	perimeter and area of a two-dimensional shape when the dimensions are changed, EX. length of sides are doubled		
G.8.6.3	Identify, describe, draw, and classify triangles as equilateral, isosceles, scalene, right, acute, obtuse, and equiangular	MM1-480	Identifying and Labeling Triangles According to Their Sides and Angles
G.8.6.4	Draw, label and determine relationships among the radius, diameter, center and circumference (e.g. radius is half the diameter) of a circle	MM1-515	Defining a Circle
G.8.6.5	Identify similar figures and explore their properties	MM1-470	Using Ratios to Identify Similar Figures
G.9.6.1	Identify and describe line and rotational symmetry in two-dimensional shapes, patterns and designs	MM1-500	Using Translations, Rotations and Reflections to Transform Shapes
G.9.6.2	Describe positions and orientations of shapes under transformation (translation, reflection and rotation) recognizing the size and shape do not change	MM1-500	Using Translations, Rotations and Reflections to Transform Shapes
G.10.6.1	Use ordered pairs to plot points in Quadrant I	MM1-642	Exploring the Coordinate Plane and Graphing Ordered Pairs
G.10.6.2	Plot points that form the vertices of a geometric figure and draw, identify and classify the figure.	MPA-108	Graphing Translations and Reflections on the Coordinate Plane
		MPA-120	Applying Dilations in the Coordinate Plane
G.11.6.1	Identify two-dimensional patterns (nets) for three-dimensional solids, such as prisms, pyramids, cylinders, and cones	MPA-106	Identifying a Solid Figure From a Net
MEASUREMENT			
M.12.6.1	Identify and select appropriate units and tools from both systems to measure, EX. angles with degrees, distance with feet/meters	MM1-460	Measuring and Classifying Angles
		MPA-130	Developing a Sense of Relative Sizes of Measures
		<i>Throughout</i>	
M.12.6.2	Make conversions within the same measurement system in real world problems, EX. hours to minutes to seconds, meters to centimeters, feet to inches, liters to milliliters, quarts to gallons, etc	MM1-535	Converting Customary Units of Measurement for Length
		MM1-540	Converting Customary Unit of Measurement for Capacity and Weight
M.12.6.3	Compare and contrast the differences among linear units, square units, and cubic units	<i>Throughout</i>	
M.13.6.1	Solve real world problems involving one elapsed time, counting forward and backward (calendar and clock)	MM1-355	Solving Multiple-Step Problems
		MM1-555	Determining Elapsed Time from A.M. to P.M. and P.M. to A.M.
		MM1-560	Identifying Time Zones and Determining Elapsed Time Between Zones
M.13.6.2	Determine which unit of measure or measurement tool matches the context for a problem situation	MPA-130	Developing a Sense of Relative Sizes of Measures
M.13.6.3	Draw and measure distance to the nearest mm and 1/8 inch accurately	MPA-133	Distinguishing Between Exact and Approximate Answers (future release)
M.13.6.4	Establish and apply formulas to find area and perimeter of triangles, rectangles, and parallelograms	MM1-505	Determining the Perimeter of Any Polygon
		MM1-510	Determining the Area of Parallelograms and Triangles
M.13.6.5	Find the distance between two points on a number line	<i>Lesson in Development</i>	HGM-010 Measuring and Drawing Segments
M.13.6.6	Use estimation to check the reasonableness of measurements obtained from use of various instruments (including angle measures)	MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
DATA ANALYSIS AND PROBABILITY			
DAP.14.6.1	Formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within one population	MM1-385	Collecting Data
DAP.14.6.2	Collect data and select appropriate graphical representations to display the data including Venn diagrams	MM1-385	Collecting Data
		MM1-390	Understanding Data in Bar Graphs, Line Graphs, and Stem-and-Leaf Plots
		MM1-430	Using Graphs to Solve Story Problems
		MM1-435	Using Pictographs, Bar Graphs and Line Graphs to Solve Problems

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		MM1-445	Interpreting and Making Decisions from Graphically Represented Data
		HA1-886	Unions and Intersections of Sets Using Venn Diagrams
DAP.14.6.3	Construct and interpret graphs, using correct scale, including line graphs and double-bar graphs	MM1-390	Understanding Data in Bar Graphs, Line Graphs, and Stem-and-Leaf Plots
		MM1-395	Analyzing Data in Line Graphs, Bar Graphs, Stem-and-Leaf Plots
		MM1-400	Interpreting Double Bar Graphs
		MM1-405	Interpreting and Constructing Circle Graphs
		MM1-410	Interpreting Box-and-Whisker Plots
		MM1-430	Using Graphs to Solve Story Problems
		MM1-435	Using Pictographs, Bar Graphs and Line Graphs to Solve Problems
		MM1-445	Interpreting and Making Decisions from Graphically Represented Data
		MPA-129	Choosing Appropriate Scales and Intervals for Data (an Introduction)
DAP.15.6.1	Interpret graphs such as double line graphs and circle graphs	MM1-395	Analyzing Data in Line Graphs, Bar Graphs, Stem-and-Leaf Plots
		MM1-400	Interpreting Double Bar Graphs
		MM1-405	Interpreting and Constructing Circle Graphs
		MM1-445	Interpreting and Making Decisions from Graphically Represented Data
DAP.15.6.2	Compare and interpret information provided by measures of central tendencies (mean, median and mode) and measures of spread (range)	MM1-415	Defining and Calculating the Range and the Mean
		MM1-420	Defining and Calculating the Median and the Mode
DAP.16.6.1	Use observations about differences in data to make justifiable inferences		
DAP.17.6.1	Distinguish between theoretical and experimental probability	MM1-235	Finding Experimental Probability

MM1-Fundamentals of Mathematics (Fall 2005)

MPA- Pre-Algebra

HA1-Algebra 1

Note: Standards were taken from the Arkansas K-8 Mathematics Curriculum Framework document adopted by the Arkansas State Board of Education and revised in 2004.