



6th Grade Correlation to Mathematics Standards

	Mathematics Curriculum Framework	I CAN Learn [®] Lesson #	I CAN Learn [®] Lesson Title
STRAND 1	NUMBER AND OPERATIONS		
Concept 1	Number Sense		
PO 1.	Convert between expressions for positive rational numbers, including fractions, decimals, percents, and ratios.	MM1-358	Converting Fractions and Mixed Numbers with Denominators of Powers of Ten to Decimals
		MM1-360	Expressing Percent as a Ratio
		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
PO 2.	Use prime factorization to		
	· express a whole number as a product of its prime factors and	MM1-090	Identifying Prime and Composite Numbers
		MM1-095	Expressing a Number as a Product of Prime Numbers
	· determine the greatest common factor and least common multiple of two whole numbers.	MM1-105	Identifying the Greatest Common Factor and the Least Common Multiple
		MM1-130	Identifying the Least Common Denominator
PO 3.	Demonstrate an understanding of fractions as rates, division of whole numbers, parts of a whole, parts of a set, and locations on a real number line.	MM1-065	Solving Division in Three Forms
		MM1-075	Dividing with Remainders and Zeros in the Quotient
		MM1-120	Identifying Proper and Improper Fractions
		MM1-125	Writing Mixed Numbers as Improper Fractions
		MM1-127	Writing Remainders as Fractions
		MM1-110	Comparing and Ordering Fractions with Like Denominators
		MM1-135	Comparing and Ordering Fractions with Like and Unlike Denominators
PO 4.	Compare and order integers; and positive fractions, decimals, and percents.	MM1-575	Comparing and Ordering Integers
		MM1-110	Comparing and Ordering Fractions with Like Denominators
		MM1-135	Comparing and Ordering Fractions with Like and Unlike Denominators
		MM1-275	Comparing Decimal Numbers
		MM1-602	Comparing and Ordering Rational Numbers
PO 5.	Express that a number's distance from zero on the number line is its absolute value.	MM1-570	Identifying Integers and Absolute Value
PO 6.	Express the inverse relationships between exponents and roots for perfect squares and cubes.	MM1-565	Finding Squares and Square Roots
Concept 2	Numerical Operations		
PO 1.	Apply and interpret the concepts of addition and subtraction with integers using models.	MM1-580	Adding Integers with Like and Unlike Signs
		MM1-585	Subtracting Integers with Like and Unlike Signs
		MPA-117	Modeling Algebraic Expressions and Equations Using Cups and Counters

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PO 2.	Multiply multi-digit decimals through thousandths.	MM1-310	Multiplying Decimals
		MM1-320	Performing Mathematical Operations with Decimal Numbers in Application Problems
PO 3.	Divide multi-digit whole numbers and decimals by decimal divisors with and without remainders.	MM1-065	Solving Division in Three Forms
		MM1-075	Dividing with Remainders and Zeros in the Quotient
		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
		MM1-325	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
PO 4.	Multiply and divide fractions.	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
		MM1-190	Finding the Fraction of a Given Number
PO 5.	Provide a mathematical argument to explain operations with two or more fractions or decimals.	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
		MM1-190	Finding the Fraction of a Given Number
		MM1-195	Identifying the Mathematical Question Given in a Word Problem
		MM1-300	Adding and Subtracting Decimals
		MM1-305	Estimating Products by Rounding to the Nearest Whole Number
		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
PO 6.	Apply the commutative, associative, distributive, and identity properties to evaluate numerical expressions involving whole numbers.	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
		MPA-122	Modeling Multiplication and Division of Decimals
		MPA-123	Modeling Multiplication and Division of Fractions
		MM1-025	Identifying the Properties of Addition
		MM1-045	Identifying and Using Properties of Multiplication to Solve Problems
PO 7.	Simplify numerical expressions (involving fractions, decimals, and exponents) using the order of operations with or without grouping symbols.	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
Concept 3	Estimation		
PO 1.	Use benchmarks as meaningful points of comparison for rational numbers.	MM1-010	Rounding Whole Numbers to the Nearest Million, 10 Million, 100 Million and Billion

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		MM1-030	Estimating Sums and Differences
		MM1-050	Identifying Special Patterns in Multiplication
		MM1-060	Estimating Products
		MM1-070	Estimating Quotients
		MM1-305	Estimating Products by Rounding to the Nearest Whole Number
		MM1-340	Rounding Quotients
PO 2.	Make estimates appropriate to a given situation and verify the reasonableness of the results.	MM1-010	Rounding Whole Numbers to the Nearest Million, 10 Million, 100 Million and Billion
		MM1-030	Estimating Sums and Differences
		MM1-050	Identifying Special Patterns in Multiplication
		MM1-060	Estimating Products
		MM1-070	Estimating Quotients
		MM1-305	Estimating Products by Rounding to the Nearest Whole Number
		MM1-340	Rounding Quotients
STRAND 2	DATA ANALYSIS, PROBABILITY AND DISCRETE MATHEMATICS		
Concept 1	Data Analysis (Statistics)		
PO 1.	Solve problems by selecting, constructing, and interpreting displays of data, including histograms and stem-and-leaf plots.	MPA-129	Choosing Appropriate Scales and Intervals for Data
		MM1-390	Understanding Data in Bar Graphs, Line Graphs, and Stem-and-Leaf Plots
		MPA-094	Interpreting and Constructing Line Plots
		MPA-096	Constructing 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
		MPA-131	Interpreting and Creating Histograms
PO 2.	Formulate and answer questions by interpreting, analyzing, and drawing inferences from displays of data, including histograms and stem-and-leaf plots.	MPA-129	Choosing Appropriate Scales and Intervals for Data
		MM1-390	Understanding Data in Bar Graphs, Line Graphs, and Stem-and-Leaf Plots
		MPA-094	Interpreting and Constructing Line Plots
		MPA-096	Constructing 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
		MPA-131	Interpreting and Creating Histograms
PO 3.	Use extreme values, mean, median, mode, and range to analyze and describe the distribution of a given data set.	MM1-415	Defining and Calculating the Range and the Mean
		MM1-420	Defining and Calculating the Median and the Mode
PO 4.	Compare two or more sets of data by identifying trends.	MM1-400	Interpreting Double Bar Graphs
		MM1-430	Using Graphs to Solve Story Problems
		MM1-435	Using Pictographs, Bar Graphs and Line Graphs to Solve Problems
Concept 2	Probability		
PO 1.	Use data collected from multiple trials of a single event to form a conjecture about the theoretical probability.	MM1-230	Finding the Probability of Simple Events
PO 2.	Use theoretical probability to		
	· predict experimental outcomes,	MM1-235	Finding Experimental Probability
	· compare the outcome of the experiment to the prediction, and	MM1-235	Finding Experimental Probability
	· replicate the experiment and compare results.	MM1-235	Finding Experimental Probability

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PO 3.	Determine all possible outcomes (sample space) of a given situation using a systematic approach.	MM1-230	Finding the Probability of Simple Events
		MPA-089	Using Tree Diagrams
Concept 3	Systemic Listing and Counting		
PO 1.	Build and explore tree diagrams where items repeat.	MPA-089	Using Tree Diagrams
PO 2.	Explore counting problems with Venn diagrams using three attributes.	MPA-091	Finding the Number of Combinations of a Set of Objects
Concept 4	Vertex-Edge Graphs		
PO 1.	Investigate properties of vertex-edge graphs	Content under review	
	· Hamilton paths,		
	· Hamilton circuits, and		
	· shortest route.		
PO 2.	Solve problems related to Hamilton paths and circuits.	Content under review	
STRAND 3	PATTERNS, ALGEBRA AND FUNCTIONS		
Concept 1	Patterns		
PO 1.	Recognize, describe, create, and analyze a numerical sequence involving fractions and decimals using all four basic operations.	MM1-020	Identifying and Finding Number Patterns Using Whole Numbers
		MPA-104	Recognizing Patterns
Concept 2	Functions and Relationships		
PO 1.	Recognize and describe a relationship between two quantities, given by a chart, table, or graph, using words and expressions.	Content under review	
		MM1-615	Translating Words into Algebra
		MM1-425	Classifying Information from a Mathematical Story
Concept 3	Algebraic Representations		
PO 1.	Use an algebraic expression to represent a quantity in a given context.	MM1-600	Introducing Variables in Algebra
PO 2.	Create and solve two-step equations that can be solved using inverse properties with fractions and decimals.	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
PO 3.	Translate both ways between a verbal description and an algebraic expression or equation.	MM1-615	Translating Words into Algebra
PO 4.	Evaluate an expression involving the four basic operations by substituting given fractions and decimals for the variable.	MM1-620	Using the Order of Operations in Algebraic Expressions
Concept 4	Analysis of Change		
PO 1.	Determine a pattern to predict missing values on a line graph or scatterplot.	MM1-430	Using Graphs to Solve Story Problems
		MM1-435	Using Pictographs, Bar Graphs and Line Graphs to Solve Problems
		MPA-132	Interpreting and Creating Scatterplots
		MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
STRAND 4	GEOMETRY AND MEASUREMENT		
Concept 1	Geometric Properties		
PO 1.	Define π (π) as the ratio between the circumference and diameter of a circle and explain the relationship among the diameter, radius, and circumference.	MM1-515	Defining a Circle
		MPA-070	Finding the Circumference of a Circle
PO 2.	Solve problems using properties of supplementary, complementary, and vertical angles.	MM1-455	Identifying Basic Terms Used in Geometry
		MM1-460	Measuring and Classifying Angles
Concept 2	Transformation of Shape		
PO 1.	Identify a simple translation or reflection and model its effect on a 2-dimensional figure on a coordinate plane using all four quadrants.	MM1-500	Using Translations, Rotations and Reflections to Transform Shapes

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PO 2.	Draw a reflection of a polygon in the coordinate plane using a horizontal or vertical line of reflection.	MPA-108 MPA-108	Graphing Translations and Reflections on the Coordinate Plane Graphing Translations and Reflections on the Coordinate Plane
Concept 3	Coordinate Geometry		
PO 1.	Graph ordered pairs in any quadrant of the coordinate plane.	MM1-642	Exploring the Coordinate Plane and Graphing Ordered Pairs
PO 2.	State the missing coordinate of a given figure on the coordinate plane using geometric properties to justify the solution.	MM1-642	Exploring the Coordinate Plane and Graphing Ordered Pairs
Concept 4	Measurement		
PO 1.	Determine the appropriate unit of measure for a given context and the appropriate tool to measure to the needed precision (including length, capacity, angles, time, and mass).	MPA-130	Developing a Sense of Relative Sizes of Measures
		MPA-133	Distinguishing Between Exact and Approximate Answers
		MM1-535	Converting Customary Units of Measurement for Length
		MM1-540	Converting Customary Units of Measurement for Capacity and Weight
		MM1-545	Converting Metric Units of Measurement for Length
		MM1-550	Converting Metric Units of Measurement for Mass and Capacity
		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
PO 2.	Solve problems involving conversion within the U.S. Customary and within the metric system.	MM1-535	Converting Customary Units of Measurement for Length
		MM1-540	Converting Customary Units of Measurement for Capacity and Weight
		MM1-545	Converting Metric Units of Measurement for Length
		MM1-550	Converting Metric Units of Measurement for Mass and Capacity
PO 3.	Estimate the measure of objects using a scale drawing or map.	MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
PO 4.	Solve problems involving the area of simple polygons using formulas for rectangles and triangles.	MM1-510	Determining the Area of Parallelograms and Triangles
PO 5.	Solve problems involving area and perimeter of regular and irregular polygons.	MM1-505	Determining the Perimeter of Any Polygon
		MM1-510	Determining the Area of Parallelograms and Triangles
		MPA-068	Finding the Area of Irregular Figures
PO 6.	Describe the relationship between the volume of a figure and the area of its base.	MM1-525	Finding the Volume of Rectangular and Triangular Prisms
		MM1-530	Finding the Volume of a Cylinder
STRAND 5	STRUCTURE AND LOGIC		
Concept 1	Algorithms and Algorithmic Thinking		
PO 1.	Analyze algorithms for multiplying and dividing fractions and decimals using the associative, commutative, and distributive properties.	MM1-050	Identifying Special Patterns in Multiplication
		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
		MM1-310	Multiplying Decimals
		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
PO 2.	Create and justify an algorithm to determine the area of a given compound figure using parallelograms and triangles.	MM1-510	Determining the Area of Parallelograms and Triangles
		MPA-068	Finding the Area of Irregular Figures
Concept 2	Logic, Reasoning, Problem Solving, and Proof		
PO 1.	Analyze a problem situation to determine the question(s) to be answered.	MM1-195	Identifying the Mathematical Question Given in a Word Problem

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		MM1-355	Solving Multiple-Step Problems
		MM1-425	Classifying Information from a Mathematical Story
PO 2.	Identify relevant, missing, and extraneous information related to the solution to a problem.	MM1-195	Identifying the Mathematical Question Given in a Word Problem
		MM1-355	Solving Multiple-Step Problems
		MM1-425	Classifying Information from a Mathematical Story
PO 3.	Analyze and compare mathematical strategies for efficient problem solving; select and use one or more strategies to solve a problem.	Throughout	This standard is demonstrated throughout. For examples please see:
		MM1-195	Identifying the Mathematical Question Given in a Word Problem
		MM1-355	Solving Multiple-Step Problems
		MM1-425	Classifying Information from a Mathematical Story
PO 4.	Apply a previously used problem-solving strategy in a new context.	Throughout	This standard is demonstrated throughout. For examples please see:
		MM1-355	Solving Multiple-Step Problems
		MM1-640	Solving Algebraic Word Problems
		MM1-320	Performing Mathematical Operations with Decimal Numbers in Application Problems
PO 5.	Represent a problem situation using multiple representations, describe the process used to solve the problem, and verify the reasonableness of the solution.	Throughout	This standard is demonstrated throughout. For examples please see:
		MM1-017	Identifying Exponential and Standard Form of a Number
		MM1-090	Identifying Prime and Composite Numbers
		MM1-165	Multiplying Fractions
		MM1-425	Classifying Information from a Mathematical Story
		MM1-570	Identifying Integers and Absolute Value
		MM1-642	Exploring the Coordinate Plane and Graphing Ordered Pairs
PO 6.	Communicate the answer(s) to the question(s) in a problem using appropriate representations, including symbols and informal and formal mathematical language.	Throughout	This standard is demonstrated throughout. For examples please see:
		MM1-615	Translating Words into Algebra
		MM1-635	Calculating Distance, Rate, or Time by Solving Equations
		MM1-640	Solving Algebraic Word Problems
PO 7.	Isolate and organize mathematical information taken from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.	Throughout	This standard is demonstrated throughout. For examples please see:
		MM1-600	Introducing Variables in Algebra
		MM1-455	Identifying Basic Terms Used in Geometry
		MPA-125	Formulating a Possible Problem Situation Given an Equation
		MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
PO 8.	Make and test conjectures based on information collected from explorations and experiments.	MM1-385	Collecting Data
		MM1-390	Understanding Data in Bar Graphs, Line Graphs, and Stem-and-Leaf Plots
		MM1-400	Interpreting Double Bar Graphs
		MM1-405	Interpreting and Constructing Circle Graphs
		MM1-230	Finding the Probability of Simple Events
		MM1-235	Finding Experimental Probability
PO 9.	Solve simple logic problems, including conditional statements, and justify solution methods and reasoning.	MPA-007	Solving Problems Using Logical Reasoning Skills
		MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

Note: Standards were taken from the Arizona Mathematics Standards Articulated by Grade Level document adopted by the Arizona State Board of Education and published in 2008.