



## 8<sup>th</sup> Grade TEKS Correlation

	Mathematics Curriculum Framework	Lesson Number	Lesson Title
<b>NUMBER, OPERATION, AND QUANTITATIVE REASONING</b>			
8.1 (A)	Compare and order rational numbers in various forms including integers, percents, and positive and negative fractions and decimals.	MPA-001	Identifying, Comparing, and Ordering Whole Numbers Through Billions
		MPA-015	Identifying the Place Value of Decimals Through Thousandths
		MPA-016	Comparing and Ordering Decimals
		MPA-031	Comparing and Ordering Fractions and Decimals
		MPA-045	Comparing and Ordering Integers
		MPA-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
		HA1-015	Graphing Real Numbers Using a Number Line
		HA1-020	Classifying Numbers into Subsets of Real Numbers
		HA1-025	Comparing and Ordering Real Numbers
8.1 (B)	Select and use appropriate forms of rational numbers to solve real-life problems including those involving proportional relationships.	MPA-079	Unit rates
		MPA-080	Solving Proportions
		MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
		MPA-086	Solving Problems Using Percent
		MPA-087	Finding Percent Increase and Decrease
		MPA-088	Solving Real-World Problems Involving Percent
		MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
		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
		HA1-150	Writing an Equation to Solve Word Problems
		HA1-155	Writing an Equation to Solve Consecutive Integer Problems
		HA1-165	Using Equations to Solve Percent Problems
		HA1-170	Solving Percent of Change Problems
8.1 (C)	Approximate (mentally and with calculators) the value of irrational numbers as they arise from problem situations (such as $\pi$ , $\sqrt{2}$ ).	MPA-065	Estimating Square Roots
8.1 (D)	Express numbers in scientific notation, including negative exponents, in appropriate problem situations.	MPA-013	Using Powers and Exponents in Expressions
		MPA-021	Converting Between Standard and Scientific Notation
		HA1-095	Translating Word Phrases into Algebraic Expressions
		HA1-104	Translating Word Statements into Equations
		HA1-235	Writing, Multiplying, and Dividing Numbers Written in Scientific Notation
8.2 (A)	Select appropriate operations to solve problems involving rational numbers and justify the selections.	MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
		MPA-003	Using Four-Step Plan for Problem Solving

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		MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
		MPA-008	Order of Operations
		MPA-042	Solving Problems Using an Equation
8.2 (B)	Use appropriate operations to solve problems involving rational numbers in problem situations.	MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
		MPA-012	Solving One-Step Equations of Whole Numbers Using All Operations
		MPA-018	Adding and Subtracting Decimals
		MPA-019	Multiplying Decimals
		MPA-022	Dividing Decimals
		MPA-023	Rounding Quotients Involving Decimals
		MPA-034	Adding and Subtracting Fractions
		MPA-035	Adding and Subtracting Mixed Numbers with Unlike Denominators
		MPA-036	Multiplying Fractions and Mixed Numbers and Simplifying
		MPA-037	Dividing Fractions and Mixed Numbers and Simplifying
		MPA-047	Adding Integers with Like Signs
		MPA-048	Adding Integers with Unlike Signs
		MPA-050	Subtracting Integers with Unlike Signs
		MPA-051	Multiplying Integers with Like and Unlike Signs
		MPA-052	Dividing Integers with Like and Unlike Signs
		MPA-053	Adding, Subtracting, Multiplying, and Dividing Integers
8.2 (C)	Evaluate a solution for reasonableness.	MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
8.2 (D)	Use multiplication by a constant factor (unit rate) to represent proportional relationships	MPA-079	Unit rates
		MPA-080	Solving Proportions
<b>PATTERNS, RELATIONSHIPS, AND ALGEBRAIC THINKING</b>			
8.3 (A)	Compare and contrast proportional and non-proportional linear relationships.	MPA-078	Expressing Ratios as Fractions and Determining Equivalency
		MPA-080	Solving Proportions
		MPA-088	Solving Real-World Problems Involving Percent
		MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
8.3 (B)	Estimate and find solutions to application problems involving percents and other proportional relationships such as similarity and rates.	MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
8.4	Generate a different representation of data given another representation of data (such as a table, graph, equation, or verbal description).	MPA-125	Formulating a Possible Problem Situation Given an Equation
8.5 (A)	Predict, find, and justify solutions to application problems using appropriate tables, graphs, and algebraic equations.	MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
		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-100	Solving Two-Step Equations
		MPA-101	Solving Equations by Combining Like Terms
		MPA-042	Solving Problems Using an Equation
8.5 (B)	Find and evaluate an algebraic expression to determine any term in an arithmetic sequence (with a constant rate of change).	MPA-104	Recognizing Patterns
		HA1-447	Identifying Number Patterns
		HA1-448	Finding the $n$ th Term of a Pattern
<b>GEOMETRY AND SPATIAL REASONING</b>			
8.6 (A)	Generate similar figures using dilations including enlargements and reductions.	MPA-120	Applying Dilations in the Coordinate Plane
8.6 (B)	Graph dilations, reflections, and translations on a coordinate plane.	MPA-108	Graphing Translations and Reflections on the Coordinate Plane

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8.7 (A)	Draw three-dimensional figures from different perspectives.	MPA-120	Applying Dilations in the Coordinate Plane
		MPA-106	Identifying a Solid Figure From a Net
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions
		HA1-893	Constructing Solids from Different Perspectives
8.7 (B)	Use geometric concepts and properties to solve problems in fields such as art and architecture.	MPA-055	Finding the Perimeter of a Figure
		MPA-067	Finding the Area of Rectangles and Parallelograms
		MPA-068	Finding the Area of Irregular Figures
		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
8.7 (C)	Use pictures or models to demonstrate the Pythagorean Theorem.	MPA-115	Finding the Volumes of Prisms, Cylinders, Pyramids, and Cones Using Models
		MPA-066	Solving Problems Using the Pythagorean Theorem
		HA1-515	Using the Pythagorean Theorem
8.7 (D)	Locate and name points on a coordinate plane using ordered pairs of rational numbers.	HA1-516	Applications of the Pythagorean Theorem
		MPA-046	Graphing Points on a Coordinate Plane
<b>MEASUREMENT</b>			
8.8 (A)	Find lateral and total surface area of prisms, pyramids, and cylinders using concrete models and nets (two-dimensional models).	MPA-073	Finding the Surface Area of Rectangular Prisms
		MPA-074	Finding the Surface Area of Cylinders
		HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
8.8 (B)	Connect models of prisms, cylinders, pyramids, spheres, and cones to formulas for volume of these objects.	MPA-075	Finding the Volume of Rectangular Prisms
		MPA-076	Finding the Volume of Cylinders
		MPA-115	Finding the Volumes of Prisms, Cylinders, Pyramids, and Cones Using Models
		HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
8.8 (C)	Estimate measurements and use formulas to solve application problems involving lateral and total surface area and volume.	MPA-073	Finding the Surface Area of Rectangular Prisms
		MPA-074	Finding the Surface Area of Cylinders
		MPA-075	Finding the Volume of Rectangular Prisms
		MPA-076	Finding the Volume of Cylinders
		MPA-115	Finding the Volumes of Prisms, Cylinders, Pyramids, and Cones Using Models
8.9 (A)	Use the Pythagorean Theorem to solve real-life problems.	HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
		MPA-066	Solving Problems Using the Pythagorean Theorem
		HA1-515	Using the Pythagorean Theorem
		HA1-516	Applications of the Pythagorean Theorem
8.9 (B)	Use proportional relationships in similar two-dimensional figures or similar three-dimensional figures to find missing measurements.	MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
8.10 (A)	Describe the resulting effects on perimeter and area when dimensions of a shape are changed proportionally.	MPA-121	Identifying Similar and Congruent Polygons Using Proportions
		MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
8.10 (B)	Describe the resulting effect on volume when dimensions of a solid are changed proportionally.	MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
<b>PROBABILITY AND STATISTICS</b>			
8.11 (A)	Find the probabilities of dependent and independent events.	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
8.11 (B)	Use theoretical probabilities and experimental results to make predictions and decisions.	MPA-113	Finding the Probability of Compound Events Through Experimentation
		MPA-090	Finding the Probability of Simple Real-Life Events
8.11 (C)	Select and use different models to simulate an event.	MPA-090	Finding the Probability of Simple Real-Life Events

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		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
8.12 (A)	Select the appropriate measure of central tendency or range to describe a set of data and justify the choice for a particular situation.	MPA-095	Find the Mean, Median, and Mode
8.12 (B)	Draw conclusions and make predictions by analyzing trends in scatter plots.	MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
		MPA-132	Interpreting and Creating Scatter Plots
8.12 (C)	Select and use an appropriate representation for presenting and displaying relationships among collected data, including line plots, line graphs, stem and leaf plots, circle graphs, bar graphs, box and whisker plots, histograms, and Venn diagrams, with and without the use of technology.	MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs
		MPA-129	Choosing Appropriate Scales and Intervals for Data (an Introduction)
		MPA-093	Choosing Appropriate Scales and Intervals for Data
		MPA-094	Interpreting and Constructing Line Plots
		MPA-096	Constructing Stem-and-Leaf Plots
		MPA-097	Constructing Box-and-Whisker Plots
		MPA-131	Interpreting and Creating Histograms
		MPA-132	Interpreting and Creating Scatter Plots
		MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
		MPA-099	Recognizing Misleading Statistics and Graphs
		HA1-886	Unions and Intersections of Sets Using Venn Diagrams
8.13 (A)	Evaluate methods of sampling to determine validity of an inference made from a set of data.	MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
8.13 (B)	Recognize misuses of graphical or numerical information and evaluate predictions and conclusions based on data analysis.	MPA-099	Recognizing Misleading Statistics and Graphs
<b>UNDERLYING PROCESSES AND MATHEMATICAL TOOLS</b>			
8.14 (A)	Identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics.	MPA-003	Using Four-Step Plan for Problem Solving
		MPA-007	Solving Problems Using Logical Reasoning Skills
		MPA-116	Solving Real-Life Problems by Using Guess-and-Check and Working Backwards
		<i>Throughout</i>	
8.14 (B)	Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.	MPA-003	Using Four-Step Plan for Problem Solving
		MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
		<i>Throughout</i>	
8.14 (C)	Select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.	MPA-003	Using Four-Step Plan for Problem Solving
		MPA-007	Solving Problems Using Logical Reasoning Skills
		MPA-116	Solving Real-Life Problems by Using Guess-and-Check and Working Backwards
		<i>Throughout</i>	
8.14 (D)	Select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.	<i>Throughout</i>	
8.15 (A)	Communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.	<i>Throughout</i>	

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8.15 (B)	Evaluate the effectiveness of different representations to communicate ideas.	<i>Throughout</i>	
8.16 (A)	Make conjectures from patterns or sets of examples and non-examples.	<i>Throughout</i>	
8.16 (B)	Validate his/her conclusions using mathematical properties and relationships.	<i>Throughout</i>	

MM1-Fundamentals of Mathematics  
MPA-Pre-Algebra  
HA1-Algebra 1

Note: The standards and expectations in this document were obtained from the Texas Education Agency Chapter 111. Texas Essential Knowledge and Skills for Mathematics with a revised date of March 2005 and an effective date for the 2005-2006 school year.