



Grade 8 Correlation to Assessment Anchors

	Pennsylvania Assessment Anchors and Eligible Content	I CAN Learn [®] Lesson #	I CAN Learn [®] Lesson Title
M8.A	Numbers and Operations		
M8.A.1.1.1	Represent numbers using scientific notation and/or exponential forms.	MPA-021	Converting Between Standard and Scientific Notation
		MPA-013	Using Powers and Exponents in Expressions
M8.A.1.1.2	Find the square or cube of a whole number (single digit) and/or the square root of a perfect square (without a calculator) and explain the relationship between the two (i.e. square and square root).	MPA-013	Using Powers and Exponents in Expressions
		HA1-480	Finding the Square Roots of Rational Numbers
		MM1-565	Finding Squares and Square Roots
M8.A.2.1.1	Simplify numeric expressions involving integers, using the order of operations. (May include all types of grouping symbols. No combining negatives with exponents $[4^{-3}]$ or compound exponents.)	HA1-060	Evaluating Numerical Expressions Using the Order of Operations
M8.A.2.2.1	Solve problems involving percents (e.g., tax, discounts, etc) Do not include percent increase or decrease.	MPA-083	Finding Number Given Percent and Total
		MPA-084	Finding Percent Given Number and Total
		MPA-085	Finding Total Given Number and Percent
		MPA-126	Solving Real-World Problems Involving Sales Tax
		MPA-127	Solving Real-World Problems Involving Discounts, Markup, and Commission
		MPA-128	Solving Real-World Problems Involving Simple and Compound Interest
M8.A.2.2.2	Represent or solve rate problems (e.g., unit rates, simple interest, distance, etc.) Students may be asked to solve for any term (formulas provided on the reference sheet for distance and interest).	MPA-155	Comparing and Converting Rates
		MPA-077	Solving Problems Using a Formula
		MM1-610	Finding Simple Interest
		MM1-635	Calculating Distance, Rate, or Time by Solving Equations
M8.A.3.1.1	Identify, use and/or explain when it is appropriate to round up or round down.	MPA-004	Using Rounding to Estimate
		MPA-017	Rounding Decimals and Estimating Computations Using Decimals
M8.A.3.1.2	Identify, apply and/or explain when an exact answer is needed or when estimation is appropriate.	MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
		MPA-133	Distinguishing Between Exact and Approximate Answers
M8.A.3.2.1	Estimate answers to problems involving percents (percents will be limited to: 1%, 10%, 15%, 20%, 25%, 50% or 75%).	MPA-083	Finding Number Given Percent and Total
		MPA-084	Finding Percent Given Number and Total
		MPA-085	Finding Total Given Number and Percent
M8.A.3.3.1	Add, subtract, multiply and/or divide integers, fractions and/or decimals with and without a calculator (straight computation or word problems).	MPA-047	Adding Integers with Like Signs
		MPA-048	Adding Integers with Unlike Signs
		MPA-050	Subtracting Integers with Unlike Signs

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		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
		MPA-018	Adding and Subtracting Decimals
		MPA-019	Multiplying Decimals
		MPA-020	Multiplying Decimals by Powers of Ten
		MPA-119	Dividing 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
M8.B	Measurement		
M8.B.1.1.1	Convert among metric measurements (milli, centi, kilo using meter, liter and gram) (table of equivalency provided on the reference sheet).	MPA-061	Converting Metric Units of Length, Capacity, and Mass
M8.B.1.1.2	Convert customary measurements up to 2 units above or below the given unit (e.g., inches to yards, pints to gallons) (table of equivalency provided on the reference sheet).	MPA-062	Converting Units in Customary System
M8.B.1.1.3	Convert time up to 2 units above or below given unit (e.g., seconds to hours).	MPA-155	Comparing and Converting Rates
M8.B.1.1.4	Convert from Fahrenheit to Celsius or Celsius to Fahrenheit (formulas provided on the reference sheet).	MM1-605	Converting Fahrenheit and Celsius
M8.B.2.1.1	Determine the total number of degrees in the interior angles of a polygon in 3 - 8 sided figures (formula provided on the reference sheet).	MPA-060	Determining Which Figures Tessellate
M8.B.2.1.2	Determine the measurement of one interior angle of a regular polygon (3-8 sided polygons, formula provided on the reference sheet).	MPA-058	Identifying Polygons
M8.B.2.1.3	Determine the number of sides of a polygon given the total number of degrees in the interior angles (3-8 sided polygons, formula provided on the reference sheet).	MPA-060	Determining Which Figures Tessellate
M8.B.2.2.1	Calculate the surface area of cubes and rectangular prisms (formula provided on the reference sheet).	MPA-073	Finding the Surface Area of Rectangular Prisms
M8.B.2.2.2	Calculate the volume of cubes and rectangular prisms (formulas provided on the reference sheet).	MPA-075	Finding the Volume of Rectangular Prisms
M8.B.2.2.3	Determine the appropriate type of measurement (circumference, perimeter, area, surface area, volume) for a given situation (e.g., which measurement is needed to determine the amount of carpeting for a room).	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-160	Plotting Polygons and Finding the Area
		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
M8.C	Geometry		
M8.C.1.1.1	Match the three-dimensional figure with its net (cube, cylinder, cone, prism, pyramid). Any measurements used should be consistent in the stem and answer choices.	MPA-106	Identifying a Solid Figure From a Net
M8.C.1.1.2	Define, identify and/or use properties of angles formed by intersecting lines (complementary, supplementary, adjacent and/or vertical angles).	MPA-057	Identifying and Applying Supplementary and Complementary Angles
		MPA-056	Classifying Angles

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M8.C.1.1.3	Define, identify and/or use properties of angles formed when two parallel lines are cut by a transversal (alternate interior, alternate exterior, vertical corresponding).	MPA-105	Determining the Measure of Angles Made by Parallel Lines and a Transversal
M8.C.1.2.1	Use the Pythagorean Theorem to find the measure of a missing side of a right triangle (formula provided on the reference sheet – whole numbers only).	MPA-066	Solving Problems Using the Pythagorean Theorem
M8.C.3.1.1	Plot, locate or identify ordered pairs on a coordinate plane (the point may be a vertex of a polygon).	MPA-046	Graphing Points on a Coordinate Plane
		MPA-160	Plotting Polygons and Finding the Area
M8.D	Algebraic Concepts		
M8.D.1.1.1	Continue a numeric or algebraic pattern (pattern must show 3 repetitions – may include up to 2 operations, squares and square roots).	MPA-270	Generating Algebraic Expressions from Patterns of Models
		MPA-104	Recognizing Patterns
M8.D.1.1.2	Find missing elements in numeric or geometric patterns and/or functions (may be given a table or rule – pattern must show 3 repetitions).	MPA-270	Generating Algebraic Expressions from Patterns of Models
		MPA-104	Recognizing Patterns
M8.D.1.1.3	Determine the rule of a function (given elements in an input-output table, chart or list – limit to linear functions).	MPA-102	Graphing Equations by Plotting Points
		MPA-140	Examining Linear Equations in Slope-Intercept Form
		MPA-142	Solving Problems With Linear Functions and Direct Variation
M8.D.2.1.1	Solve one- or two-step equations and inequalities (should not include absolute values – one variable only).	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-042	Solving Problems Using an Equation
		MPA-100	Solving Two-Step Equations
		MPA-101	Solving Equations by Combining Like Terms
		MPA-054	Solving One-Step Equations with Integers Using all Four Operations
		MPA-109	Solving and Graphing Linear Inequalities on a Number Line
		MPA-040	Solving One-Step Equations with Decimals 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
M8.D.2.1.2	Use substitution to check the accuracy of a given value for an equation or inequality (simple inequalities with one variable).	HA1-100	Finding Solution Sets of Open Sentences from Given Replacement Sets
M8.D.2.1.3	Determine the value of an algebraic expression by simplifying and/or substituting a number for the variable.	HA1-005	Evaluating Algebraic Expressions
		HA1-065	Evaluating Expressions Containing Exponents
M8.D.2.2.1	Match a written situation to its numeric and/or algebraic expression, equation or inequality (up to two variables in equations or expressions – one variable with inequalities).	MPA-041	Writing Simple Algebraic Expressions from Phrases
		HA1-104	Translating Word Statements into Equations
		HA1-105	Translating Word Statements into Inequalities
M8.D.2.2.2	Write and/or solve an equation for a given problem situation (one variable only).	MPA-125	Formulating a Possible Problem Situation Given an Equation
M8.D.4.1.1	Graph a linear function based on an x/y table (integers only).	MPA-102	Graphing Equations by Plotting Points
		MPA-140	Examining Linear Equations in Slope-Intercept Form
		HA1-402	Translating Among Multiple Representations of Functions
M8.D.4.1.2	Match the graph of a linear function to its x/y table (integers only).	MPA-140	Examining Linear Equations in Slope-Intercept Form
		HA1-402	Translating Among Multiple Representations of Functions
M8.D.4.1.3	Match the linear equation ($y = mx + b$ form) to the x/y table (integers only in the table).	MPA-140	Examining Linear Equations in Slope-Intercept Form
		HA1-402	Translating Among Multiple Representations of Functions

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M8.E	Data Analysis and Probability		
M8.E.1.1.1	Choose and/or explain the correct representation (graph) for a set of data.	MPA-099	Recognizing Misleading Statistics and Graphs
		MPA-840	Interpreting Data
M8.E.1.1.2	Analyze data and/or answer questions pertaining to data shown in multiple line graphs, circle graphs or histograms.	MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs
		MPA-131	Interpreting and Creating Histograms
M8.E.1.1.3	Interpret data shown in stem-and-leaf or box-and-whisker plots.	MPA-096	Constructing Stem-and-Leaf Plots
		MPA-097	Constructing Box-and-Whisker Plots
M8.E.3.1.1	Find the probability for a mutually exclusive or an independent event (written as a fraction in simplest form).	MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
		HA1-560	Determining Probability of an Event and Complementary Event from a Random Experiment
		HA1-565	Solving Problems Involving Independent, Dependent, and Mutually Exclusive and Inclusive Events
M8.E.3.2.1	Determine/show the number of permutations and/or combinations for an event using up to four choices (e.g., organized list, etc.).	HA1-879	Applying Counting Techniques to Permutations and Combinations
M8.E.4.1.1	Fit a line to a scatter plot and/or describe any correlation between the two variables (positive, negative, strong, weak or none).	MPA-132	Interpreting and Creating Scatterplots
M8.E.4.1.2	Make predictions based on survey results or graphs (bar, line, circle, scatterplots, etc.).	MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
		HA1-877	Drawing Inferences and Making Predictions from Tables and Graphs

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

HGM - Geometry (New course in development)

Note: Standards were taken from the Pennsylvania Performance Standards document adopted by the Pennsylvania State Board of Education in 2008.