



High School Mathematics Correlation to Content Standards

	Oregon Content Standards	I CAN Learn [®] Lesson #	I CAN Learn [®] Lesson Title
H.1A	Algebra and Numeracy: Demonstrate a deep understanding of real numbers and algebraic symbols by fluently creating, manipulating, computing with, and determining equivalent expressions, both numeric and symbolic.		
H.1A.1	Compare, order, and locate real numbers on a number line.	HA1-015 HA1-025	Graphing Real Numbers Using a Number Line Comparing and Ordering Real Numbers
H.1A.2	Evaluate, compute with, and determine equivalent numeric and algebraic expressions with real numbers and variables that may also include absolute value, integer exponents, square roots, pi, and/or scientific notation.	HA1-030	Using Opposites and Absolute Values
		HA1-060	Evaluating Numerical Expressions Using the Order of Operations
		HA1-005	Evaluating Algebraic Expressions
		HA1-065	Evaluating Expressions Containing Exponents
		HA1-095	Translating Word Phrases into Algebraic Expressions
		HA1-070	Evaluating Formulas for Given Values of the Variables
		HA1-135	Evaluating Formulas
		HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
		HA1-076	Basic Distributive Property
		HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-810	Simplifying Expressions Using the Multiplication Properties of Exponents
		HA1-815	Simplifying Expressions with Negative and Zero Exponents
		HA1-818	Simplifying Expressions Using the Division Properties of Exponents
		HA1-235	Applying Scientific Notation
		HA1-480	Finding the Square Roots of Rational Numbers
		HA1-485	Writing Rational Numbers as Decimals or Fractions
		HA1-490	Simplifying Square Roots
		HA1-020	Classifying Numbers into Subsets of Real Numbers
		HA1-890	Using Models to Derive Formulas for Two-Dimensional Geometric Figures
		HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
H.1A.3	Express square roots in equivalent radical form and their decimal approximations when appropriate.	HA1-480	Finding the Square Roots of Rational Numbers
		MPA-065	Estimating Square Roots
H.1A.4	Develop, identify, and/or justify equivalent algebraic expressions, equations, and inequalities using the properties of exponents, equality and inequality, as well as the commutative, associative, inverse, identity, and distributive properties.	HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
		HA1-076	Basic Distributive Property
		HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-079	Using a Concrete Model to Simplify Algebraic Expressions
		HA1-090	Simplifying Expressions Using the Property of -1
		HA1-080	Simplifying and Evaluating Algebraic Expressions Containing Grouping Symbols

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		HA1-104	Translating Word Statements into Equations
		HA1-115	Using the Addition and Subtraction Properties for Equations
		HA1-120	Using the Multiplication and Division Properties for Equations
		HA1-124	Using a Concrete Model to Solve One- and Two-Step Equations
		HA1-125	Solving Equations Using More Than One Property
		HA1-140	Solving Equations by Combining Like Terms
		HA1-144	Using a Concrete Model to Solve Equations with Variables on Both Sides
		HA1-145	Solving Equations with Variables on Both Sides
		HA1-360	Expressing Ratios in Simplest Form and Solving Equations Involving Proportions
		HA1-150	Writing an Equation to Solve Word Problems
		HA1-155	Writing an Equation to Solve Consecutive Integer Problems
		HA1-160	Writing an Equation to Solve Distance, Rate, and Time Problems
		HA1-362	Solving Work Problems
		HA1-165	Using Equations to Solve Percent Problems
		HA1-170	Solving Percent of Change Problems
		HA1-100	Finding Solution Sets of Open Sentences from Given Replacement Sets
		HA1-105	Translating Word Statements into Inequalities
		HA1-180	Graphing Equations and Inequalities on the Number Line
		HA1-185	Solving Inequalities Using the Addition and Subtraction Properties
		HA1-190	Solving Inequalities Using the Multiplication and Division Properties
		HA1-195	Solving Inequalities Using More Than One Property
		HA1-200	Combined Inequalities
		HA1-205	Solving Combined Inequalities
H.1A.5	Factor quadratic expressions limited to factoring common monomial terms, perfect-square trinomials, differences of squares, and quadratics of the form $x^2 + bx + c$ that factor over the integers.	HA1-270	Factoring the Greatest Common Monomial Factor from a Polynomial
		HA1-271	Factoring Trinomials and the Differences of Squares Using Algebra Tiles
		HA1-275	Factoring the Difference Between Two Squares and Perfect Trinomial Squares
		HA1-280	Factoring $x^2 + bx + c$ When c is Greater Than Zero
		HA1-285	Factoring $x^2 + bx + c$ When c is Less Than Zero
		HA1-291	Factoring Quadratic Equations Using the Graphing Calculator
		HA1-300	Factoring a Polynomial Completely
H.2A	Algebra: Use linear equations and functions to represent relationships and solve linear equations, inequalities, systems of linear equations, and systems of linear inequalities.		
H.2A.1	Identify, construct, extend, and analyze linear patterns and functional relationships that are expressed contextually, numerically, algebraically, graphically, in tables, or using geometric figures.	HA1-436	Identifying Relations
		HA1-437	Identifying Relations as Functions
		HA1-402	Translating Among Multiple Representations of Functions
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time
		HA1-442	Interpreting Graphs of Functions in Real-Life Situations
		HA1-447	Identifying Number Patterns
		HA1-448	Finding the n th Term of a Pattern
		HA1-955	Analyzing Linear Functions
		HA1-960	Real-World Applications of Linear Functions
H.2A.2	Given a rule, a context, two points, a table of values, a graph, or a linear equation in either slope intercept or standard form, identify the slope of the line, determine the x and/or y intercept(s), and interpret the meaning of each.	HA1-380	Graphing Linear Equations
		HA1-385	Finding the Slope of a Line from its Graph or from the Coordinates of Two Points
		HA1-398	Graphing Linear Equations Using Slope and y -Intercept or Slope and a Point
		HA1-401	How Variations of "m" and "b" Affect the Graph of $y = mx + b$
		HA1-394	Interchanging Linear Equations Between Standard Form and Slope-Intercept Form

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		HA1-955	Analyzing Linear Functions
		HA1-960	Real-World Applications of Linear Functions
		HA1-442	Interpreting Graphs of Functions in Real-Life Situations
		HA1-450	Solving Problems Involving Direct Variation
		HA1-965	Determining the Best-Fitting Line
H.2A.3	Determine the equation of a line given any of the following information: two points on the line, its slope and one point on the line, or its graph. Also, determine an equation of a new line, parallel or perpendicular to a given line, through a given point.	HA1-405	Determining an Equation of a Line Given the Slope and Coordinates of One Point
		HA1-410	Determining an Equation of a Line Given the Coordinates of Two Points
		HA1-395	Finding the Equation of a Line Parallel or Perpendicular to a Given Line
		HA1-955	Analyzing Linear Functions
		HA1-960	Real-World Applications of Linear Functions
H.2A.4	Fluently convert among representations of linear relationships given in the form of a graph of a line, a table of values, or an equation of a line in slope-intercept and standard form.	HA1-402	Translating Among Multiple Representations of Functions
		HA1-441	Applications of Functions and Relations Involving Distance, Rate, and Time
		HA1-442	Interpreting Graphs of Functions in Real-Life Situations
		HA1-955	Analyzing Linear Functions
		HA1-960	Real-World Applications of Linear Functions
H.2A.5	Given a linear function, interpret and analyze the relationship between the independent and dependent variables. Solve for x given f(x) or solve for f(x) given x.	HA1-439	Using Function Notation
		HA1-402	Translating Among Multiple Representations of Functions
		HA1-955	Analyzing Linear Functions
H.2A.6	Analyze how changing the parameters transforms the graph of $f(x) = mx + b$.	HA1-401	How Variations of "m" and "b" Affect the Graph of $y = mx + b$
H.2A.7	Write, use, and solve linear equations and inequalities using graphical and symbolic methods with one or two variables. Represent solutions on a coordinate graph or number line.	HA1-104	Translating Word Statements into Equations
		HA1-115	Using the Addition and Subtraction Properties for Equations
		HA1-120	Using the Multiplication and Division Properties for Equations
		HA1-124	Using a Concrete Model to Solve One- and Two-Step Equations
		HA1-125	Solving Equations Using More Than One Property
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		HA1-200	Combined Inequalities
		HA1-205	Solving Combined Inequalities

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		HA1-382	Solving Linear Equations Using the Graphing Calculator
		HA1-415	Graphing Linear Inequalities with Two Variables
		HA1-416	Graphing Linear Inequalities with Two Variables Using the Graphing Calculator
H.2A.8	Solve systems of two linear equations graphically and algebraically, and solve systems of two linear inequalities graphically.	HA1-455	Solving Systems of Linear Equations by Graphing
		HA1-460	Solving Systems of Linear Equations by the Substitution Method
		HA1-465	Solving Systems of Linear Equations by the Addition/Subtraction Method
		HA1-470	Solving Systems of Linear Equations by the Multiply/Add/Subtract Method
		HA1-806	Solving Systems of Linear Equations Using the Graphing Calculator
		HA1-475	Graphing the Solution Set of a System of Linear Inequalities
		HA1-870	Solving Problems with Systems of Linear Equations and Inequalities
H.3A	Algebra: Use quadratic and exponential equations and functions to represent quadratic relationships.		
H.3A.1	Given a quadratic or exponential function, identify or determine a corresponding table or graph.	HA1-927	Graphing $f(x) = ax^2$ Using Dilations
		HA1-928	Graphing $f(x) = ax^2$ Using Dilations and Reflections
		HA1-929	Graphing $f(x) = ax^2 + c$ Using Dilations, Reflections, and Vertical Translations
		HA1-935	Analyzing Graphs of Quadratic Functions
		HA1-940	Applications of Quadratic Equations
		HA1-945	Real-World Applications of Quadratic Functions
		HA1-820	Graphing Exponential Functions
H.3A.2	Given a table or graph that represents a quadratic or exponential function, extend the pattern to make predictions.	HA1-935	Analyzing Graphs of Quadratic Functions
		HA1-820	Graphing Exponential Functions
		HA1-892	Data Analysis Using the Graphing Calculator
H.3A.3	Compare the characteristics of and distinguish among linear, quadratic, and exponential functions that are expressed in a table of values, a sequence, a context, algebraically, and/or graphically, and interpret the domain and range of each as it applies to a given context.	HA1-436	Identifying Relations
		HA1-437	Identifying Relations as Functions
		HA1-438	Finding the Domain and Range of Functions
		HA1-447	Identifying Number Patterns
		HA1-448	Finding the n th Term of a Pattern
H.3A.4	Given a quadratic or exponential function, interpret and analyze the relationship between the independent and dependent variables, and evaluate the function for specific values of the domain.	HA1-935	Analyzing Graphs of Quadratic Functions
		HA1-820	Graphing Exponential Functions
		HA1-892	Data Analysis Using the Graphing Calculator
		HA1-439	Using Function Notation
H.3A.5	Given a quadratic equation of the form $x^2 + bx + c = 0$ with integral roots, determine and interpret the roots, the vertex of the parabola that is the graph of $y = x^2 + bx + c$, and an equation of its axis of symmetry graphically and algebraically.	HA1-935	Analyzing Graphs of Quadratic Functions
		HA1-930	Graphing Quadratic Functions with Horizontal and Vertical Shifting
		HA1-931	Graphing Quadratic Functions with Dilations, Reflections, and Transformations
H.1G	Geometry: Apply properties of two-dimensional figures.		
H.1G.1	Identify, apply, and analyze angle relationships among two or more lines and a transversal to determine if lines are parallel, perpendicular, or neither.	HGM-060	Examining Angle Relationships and Parallel Lines
		HGM-065	Proving Lines Parallel
		HGM-070	Identifying Relationships: Parallel Lines and Segments
H.1G.2	Apply theorems, properties, and definitions to determine, identify, and justify congruency or similarity of triangles and to classify quadrilaterals.	MPA-121	Identifying Similar and Congruent Polygons Using Proportions

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H.1G.3	Apply theorems of corresponding parts of congruent and similar figures to determine missing sides and angles of polygons.	MPA-121	Identifying Similar and Congruent Polygons Using Proportions
H.1G.4	Use trigonometric ratios (sine, cosine and tangent) and the Pythagorean Theorem to solve for unknown lengths in right triangles.	HGM-215	Investigating Properties of the 30°-60°-90° Triangle
H.1G.5	Determine the missing dimensions, angles, or area of regular polygons, quadrilaterals, triangles, circles, composite shapes, and shaded regions.	HGM-220	Investigating Properties of the 45°-45°-90° Triangle
		HA1-890	Using Models to Derive Formulas for Two-Dimensional Geometric Figures
		MPA-071	Finding the Area of a Circle
		MPA-069	Finding the Area of Triangles and Trapezoids
		MPA-068	Finding the Area of Irregular Figures
H.1G.6	Determine if three given lengths form a triangle. If the given lengths form a triangle, classify it as acute, right, or obtuse.	MPA-160	Plotting Polygons and Finding the Area
		HGM-145	Classifying Triangles and Applying Angle Relationships
H.1G.7	In problems involving circles, apply theorems and properties of chords, tangents, and angles; and theorems and formulas of arcs and sectors.	Content under review	
H.2G	Geometry: Apply properties of three-dimensional solids.		
H.2G.1	Identify, classify, model, sketch, and label representations of three-dimensional objects from nets and from different perspectives.	HA1-893	Constructing Solids from Different Perspectives
		MPA-106	Identifying a Solid Figure From a Net
H.2G.2	Identify and apply formulas for surface area and volume of spheres; right solids, including rectangular prisms and pyramids; cones; and cylinders; and compositions thereof. Solve related context-based problems.	HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
		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
H.2G.3	Identify and apply formulas to solve for the missing dimensions of spheres and right solids, including rectangular prisms and pyramids, cones, and cylinders, both numerically and symbolically.	HA1-891	Using Models to Derive Formulas for Three-Dimensional Solids
		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
H.3G	Geometry: Transform and analyze figures.		
H.3G.1	Recognize and identify line and rotational symmetry of two-dimensional figures.	MPA-180	Examining Line and Rotational Symmetry
H.3G.2	Identify and perform single and composite transformations of geometric figures in a plane, including translations, origin-centered dilations, reflections across either axis or $y = \pm x$, and rotations about the origin in multiples of 90°.	MPA-108	Graphing Translations and Reflections on the Coordinate Plane
		MPA-180	Examining Line and Rotational Symmetry
H.3G.3	Apply a scale factor to determine whether two- and three-dimensional figures are similar. Compare and compute their respective areas and volumes of similar figures.	MPA-120	Applying Dilations in the Coordinate Plane
		MPA-111	Comparing Perimeters, Areas, and Volumes of Similar Geometric Figures and Solids
H.3G.4	Apply slope, distance, and midpoint formulas to solve problems in a coordinate plane.	HA1-520	Finding the Distance Between Two Points on a Coordinate Plane
		HA1-876	Applying Length, Midpoint and Slope of a Segment on a Cartesian Plane
		HGM-085	Finding the Distance Between Two Points
		HGM-090	Examining Slopes of Parallel and Perpendicular Lines
H.1S	Data Analysis: Analyze and interpret empirical data.		
H.1S.1	Given a context, determine appropriate survey methods, analyze the strengths and limitations of a particular survey, observational study, experiment, or simulation, and the display of its data.	MM1-385	Collecting Data

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H.1S.2	Evaluate data-based reports by considering the source of the data, the design of the study, and the way the data was analyzed and displayed.	MPA-099	Recognizing Misleading Statistics and Graphs
		MPA-840	Interpreting Data
H.1S.3	Compare and draw conclusions about two or more data sets using graphical displays or central tendencies and range.	HA1-540	Finding the Mean, Median, and Mode from Data and Frequency Distribution Tables
		HA1-541	Analyzing Data Using the Measures of Central Tendency and the Range
H.1S.4	Use or construct a scatter plot for a given data set, determine whether there is a (n) linear, quadratic, exponential, or no trend. If linear, determine if there is a positive or negative correlation among the data; and, if appropriate, sketch a line of best fit, and use it to make predictions.	MPA-132	Interpreting and Creating Scatterplots
		HA1-965	Determining the Best-Fitting Line
H.1S.5	Construct, analyze, and interpret tables, scatter plots, frequency distributions, and histograms of data sets.	HA1-545	Making a Frequency Distribution Table
		HA1-965	Determining the Best-Fitting Line
		MPA-131	Interpreting and Creating Histograms
		HA1-885	Histograms and the Normal Distribution
H.2S	Probability: Apply basic principles of probability.		
H.2S.1	Identify, analyze, and use experimental and theoretical probability to estimate and calculate the probability of simple events.	HA1-560	Determining Probability of an Event and Complementary Event from a Random Experiment
		MPA-090	Finding the Probability of Simple Real-Life Events
H.2S.2	Determine the sample space of a probability experiment.	MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
H.2S.3	Compute and interpret probabilities for independent, dependent, complementary, and compound events using various methods (e.g., diagrams, tables, area models, and counting techniques).	HA1-565	Solving Problems Involving Independent, Dependent, and Mutually Exclusive and Inclusive Events
		HA1-879	Applying Counting Techniques to Permutations and Combinations
		MPA-089	Using Tree Diagrams

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

HGM - Geometry Core

Note: Standards were taken from the Oregon High School Mathematics Academic Content Standards document adopted by the Oregon State Board of Education in June 2009.