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DESTINATION Math®

Correlation of Destination Math® Courseware (Mastering Skills and Concepts Course V) to Florida Sunshine State Standards and Grade Level Expectations 2003

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Mastering Skills & Concepts: Course V / Module 1: Essentials of Algebra

Sunshine State Standards: Grade Level Expectations	Unit: Algebra Fundamentals	Learning Objectives in Tutorial
Benchmark MA. B. 1.3.1 **GLE** **Seventh: Uses concrete or graphic models to create formulas for finding volumes of solids (prisms and cylinders) (obj. 1, 2)** **Benchmark MA. D. 2.3.1** **GLE** **Sixth: Uses variables to represent numbers and relationships**	Introducing Variables	1. Rewriting the formula for the volume of a rectangular prism by substituting expressions for each term 2. Using variables to represent the terms in the formula for the volume of a rectangular prism
Benchmark MA. D. 2.3.1 **GLE** **All grades**	Identifying Components of Algebraic Expressions	1. Identifying the coefficient in a variable expression 2. Identifying the constant in an expression 3. Identifying an algebraic term 4. Identifying an algebraic expression
Benchmark MA. D. 2.3.1 **GLE** **Sixth: Translates simple algebraic expressions , equations or formulas representing real-world relationships into verbal expressions or sentences** **Benchmark MA. D. 2.3.2** **GLE** **Sixth–Seventh: knows how to solve simple equations representing real world situations, using pictures, models, manipulatives, or other strategies.** **Benchmark MA. B. 2.3.1** **GLE** **Seventh: measures length, weight, or mass and capacity or volume using customary or metric units.**	Replacing Variables in a Formula	1. Substituting known values for the variables in an expression 2. Calculating the volume of a rectangular prism given the value of its dimensions

Mastering Skills & Concepts: Course V / Module 1: Essentials of Algebra

Sunshine State Standards: Grade Level Expectations	Unit: Evaluating an Algebraic Expression	Learning Objectives in Tutorial
Benchmark MA. D. 2.3.1 **GLE** **Sixth: uses variables to represent numbers and relationships (obj. 1, 2)** **Sixth–Seventh–Eighth: translates verbal expressions into algebraic expressions (obj. 2)**	Representing the Dimensions and Area of a Rectangle	1. Representing the dimensions of a rectangle in terms of l and w 2. Representing the areas of rectangles using variable expressions
Benchmark MA. D. 2.3.1. **GLE** **Sixth: Uses pictures, models, manipulatives or other strategies to solve simple one-step linear equations with rational solutions. (obj. 1, 2)** **Seventh–Eighth: Translate algebraic expressions, equations, or formulas representing real-world relationships into verbal expressions or sentences. (obj. 1,.2)** **Seventh: Given an algebraic equation or expression of a real-world relationship into verbal expressions or sentences (obj. 3)** **Eighth: Simplifies algebraic expressions that represent real-world situations by combining like terms and applying the properties of real numbers. (obj. 3, 4)** **Benchmark MA. D. 2.3.2.** **GLE** **Sixth: Knows how to solve simple equations representing real-world situations, using pictures, models, manipulatives (such as algebra tiles), or other strategies. (obj. 1, 2)** **Seventh: Simplifies algebraic expressions with one variable (obj. 3, 4)** **Eighth: Simplifies algebraic expressions with a maximum of two variables (obj. 3, 4)** **Benchmark MA. A. 3.3.1.** **GLE** **Eighth: applies the properties of real numbers to solve problems (commutative, associative, distributive, identity, equality, inverse, and closure). (obj. 1, 2)** **Benchmark MA. A. 3.3.2.** **GLE** **Sixth–Seventh: applies order of operations when solving problems (parentheses, multiplication, division, addition, subtraction). (obj. 4)**	Combining Like Terms	1. Applying the commutative property of multiplication 2. Applying the distributive property of multiplication over addition 3. Simplifying expressions by combining like terms 4. Simplifying expressions by using the order of operations

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Sunshine State Standards: Grade Level Expectations	Unit: Evaluating an Algebraic Expression	Learning Objectives in Tutorial
Benchmark MA. D. 2.3.2. **GLE** **Sixth–Seventh: Knows how to solve simple equations representing real-world situations, using pictures, models, manipulatives (such as algebra tiles) or other strategies. (obj. 1)** **Eighth: solves single- and multi-step linear equations and inequalities that represent real world situations (obj. 1)** **Benchmark MA. D. 2.3.1** **GLE** **Sixth–Seventh: uses variables to represent numbers and relationships. (obj. 2)** **Translates verbal expressions into algebraic expressions. (obj. 2)**	Evaluating Expressions Using Substitution	1. Subtracting polynomial expressions 2. Substituting values of known quantities for variables in expressions

Mastering Skills & Concepts: Course V / Module 1: Essentials of Algebra

Sunshine State Standards: Grade Level Expectations	Unit: Simple Equations	Learning Objectives in Tutorial
Benchmark MA. D. 2.3.1. **GLE** **Sixth: uses variables to represent numbers and relationships (obj. 1, 2).** **Benchmark MA. D. 2.3.2.** **GLE** **Sixth: simplifies algebraic expressions with one variable (obj. 3)**	Using Variables to Express Relationships	1. Choosing variables to represent each of the unknown quantities in a problem 2. Using algebraic expressions to show the relationship between variables 3. Substituting one variable for another and writing an equation containing only 1 variable term
Benchmark MA. D. 2.3.1. **GLE** **Seventh: Given an algebraic equation or expression of a real-world relationship into verbal expressions or sentences (obj. 1, 3)** **Eighth: Simplifies algebraic expressions that represent real-world situations by combining like terms and applying the properties of real numbers. (obj. 1, 2, 3)** **Benchmark MA. D. 2.3.2.** **GLE** **Seventh: Simplifies algebraic expressions with one variable** **Eighth: Simplifies algebraic expressions with a maximum of two variables (obj. 1)** **Benchmark MA. A. 3.3.1.** **GLE** **Eighth: applies the properties of real numbers to solve problems (commutative, associative, distributive, identity, equality, inverse, and closure). (obj. 1)**	Simplifying Algebraic Expressions	1. Simplifying one side of an equation using the distributive property of multiplication over addition and following the order of operations. 2. Combining like terms 3. Investigating the elements of an algebraic expression
Benchmark MA. D. 2.3.2. **All GLE's**	Solving Simple Equations	1. Balancing an equation 2. Isolating a variable by adding or subtracting a constant from both sides of the equation 3. Multiplying or dividing both sides of an equation by the coefficient of the variable to solve the equation 4. Checking a solution by substituting the value of a variable into the equation used to solve it 5. Solve a 2-step equation using inverse operations

Mastering Skills & Concepts: Course V / Module 1: Essentials of Algebra

Sunshine State Standards: Grade Level Expectations	Unit: Variables on Both Sides of the Equation	Learning Objectives in Tutorial
Benchmark MA. D. 2.3.1 **GLE** **Sixth: Use variables to represent numbers and relationships (obj. 1, 2)** **Eighth: Simplifies algebraic expressions that represent real-world situations by combining like terms and applying the properties of real numbers (obj. 4).** **Benchmark MA. D. 1.3.2.** **GLE** **Seventh–Eighth: Writes expressions and equations to describe relationships (obj. 3)**	Writing Equations	1. Using a variable to represent an unknown quantity in a problem 2. Using the same variable to represent a 2nd unknown quantity 3. Writing an equation that represents the conditions of the problem 4. Simplifying each side of an equation
Benchmark MA. D. 2.3.2. **GLE** **Seventh: simplifies algebraic expressions with one variable. (obj. 1, 2)** **Eighth: Simplifies algebraic expressions with two variables. (obj. 1.2)**	Simplifying Both Sides of an Equation	1. Collecting the variable terms on one side of the equation 2. Isolating the variable term
Benchmark MA. D. 2.3.2 **GLE** **Sixth: Knows how to solve simple equations representing real-world situations. (obj. 1, 2, 3)** **Seventh: Knows how to solve linear equations and inequalities representing real-world situations (obj. 1, 2, 3)** **Eighth: Solves single and multi-step linear equations and inequalities that represent real-world situations (obj. 1, 2, 3)**	Checking the Solution to an Equation	1. Solving for the variable 2. Checking the solution in the original equation 3. Checking that the solution is complete and satisfies the conditions in the problem

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Sunshine State Standards: Grade Level Expectations	Unit: Solving Literal Equations	Learning Objectives in Tutorial
Benchmark MA. D. 2.3.1. **GLE** **Sixth: Uses variables to represent numbers and relationships** **Benchmark MA. B. 1.3.1.** **GLE** **Benchmark MA. D. 2.3.2.** **GLE** **Sixth: Knows how to solve simple equations representing real world situations.** **Benchmark MA. D. 2.3.2** **GLE** **Eighth: Simplifies algebraic expressions that represent real world situations by combining like terms and applying the properties of real numbers.**	Identifying the Variables in a Given Formula	1. Identifying the variables in the formula for the volume of a frustum of a cone 2. Recognizing the radius and diameter of a circle 3. Using substitution to express one radius in terms of the other 4. Simplifying algebraic expressions by multiplying and combining like terms
Benchmark MA. D. 2.3.2 **GLE** **Sixth: knows how to solve simple equations representing real-world situations.**	Rewriting a Formula in Terms of a Different Variable	1. Using the properties of equality to rewrite a formula for a particular variable
Benchmark MA. D. 2.3.2 **GLE** **Sixth: Knows how to solve simple equations representing real-world situations, using pictures, models, manipulatives (such as algebra tiles), or other strategies. (obj. 1, 3)** **Benchmark MA. A. 3.3.2.** **GLE** **Sixth–Seventh: applies order of operations when solving problems (parentheses, multiplication, division, addition, subtraction). (obj. 2)**	Substituting Values and Solving an Equation	1. Substituting values in a literal equation to solve for a particular variable 2. Applying the order of operations to simplify expressions 3. Checking a solution in the original formula

Mastering Skills & Concepts: Course V / Module 2: Fundamentals of Geometry

Sunshine State Standards: Grade Level Expectations	Unit: Geometry Fundamentals	Learning Objectives in Tutorial
Benchmark: MA. B. 1.3.2. **GLE** **Sixth: Identifies a protractor as a tool for measuring angles and measures angles using a protractor. (obj. 2)** **Identifies and name angles according to their measure (including acute, right, obtuse, straight) (obj. 1, 5, 6, 7)** **Seventh: Find the measure of an angle by measuring with a protractor or applying angle relationship. (obj. 1, 5, 6, 7)** **Benchmark: MA. C. 1.3.1.** **GLE** **Sixth: Identifies, draws, and uses notion to denote the attributes of two-dimensional geometric figures (including points, parallel and perpendicular lines, planes, rays and parts of a circle) (obj. 3, 4)** **Seventh: Compares and describes the attributes of regular and irregular polygons (for example, parallelogram, trapezoid, pentagon, hexagon) (obj. 4)**	Naming and Measuring Angles	1. Defining a right angle 2. Using a protractor to measure angles 3. Knowing the meaning of 'perpendicular' 4. Recognizing a parallelogram as a 4-sided figure having opposite parallel sides 5. Recognizing a straight angle 6. Naming angles 7. Defining obtuse angles
Benchmark: MA. B. 1.3.2. **GLE** **Sixth: Identifies and name angles according to their measure (including acute, right, obtuse, straight) (obj. 1)** **Benchmark: MA. C. 1.3.1** **Seventh: Determines the measure of various types of angles using a protractor or angle relationships (including complementary, supplementary, and vertical angles). (2, 3)**	Defining Complementary and Supplementary Angles	1. Defining an acute angle 2. Defining supplementary angles 3. Defining complementary angles 4. Writing equations to show relationships between angles

Mastering Skills & Concepts: Course V / Module 2: Fundamentals of Geometry

Sunshine State Standards: Grade Level Expectations	Unit: Geometry Fundamentals	Learning Objectives in Tutorial
Benchmark: MA. B. 1.3.2. **GLE** **Seventh: finds the measure of an angle by measuring with a protractor or applying angle relationships (for example, corresponding, complementary, supplementary, interior, exterior) (obj. 1, 5)** **Benchmark: MA. C. 1.3.1** **GLE** **Seventh: identifies, draws, and uses symbolic notation to denote the basic properties of geometric terms including lines and congruent figures. (obj. 2, 3, 4)** **Determine the measure of various types of angles using a protractor or angle relationship (including complementary, supplementary, and vertical angles).** **Eighth: Determines and justifies the measures of various types of angles based upon geometric relationships in two- and three-dimensional shapes. (obj. 1.5)**	Recognizing Congruent Angles	1. Recognizing supplementary angles 2. Defining congruent angles 3. Defining vertical angles 4. Establishing congruence between pairs of angles 5. Identifying pairs of alternate interior and alternate exterior angles
Sunshine State Standards: Grade Level Expectations	Unit: Triangles	Learning Objectives in Tutorial
Benchmark: MA. C. 1.3.1. **GLE** **Sixth: Analyzes relationships among two-dimensional geometric figures (for example, the diagonal of a rectangle into two congruent triangles each having one half the area of the rectangle. (obj. 1)** **Benchmark: MA. B. 1.3.2** **GLE** **Sixth: Classifies triangles according to the measurement of their angles and according to the length of their sides (obj. 2, 3, 4)**	Classifying Triangles by Sides	1. Dissecting a quadrilateral into sets of triangles 2. Defining a right triangle 3. Defining an isosceles triangle 4. Defining a scalene triangle
Benchmark: MA. B. 1.3.1 **GLE** **Seventh: Solves and explains problems involving perimeter, area, and circumference (obj. 3)** **Benchmark: MA. B. 1.3.3.** **GLE** **Sixth: Knows the relationship between the area or perimeter of an original figure and that of a newly created figure. (obj. 1)** **Benchmark: MA. C. 1.3.1.** **GLE** **Seventh: Identifies and classifies triangles and quadrilaterals. (obj. 4)**	Exploring the Area of a Triangle	1. Relating the area of a triangle to the area of a rectangle 2. Identifying the height of a triangle 3. Calculating the area of a triangle 4. Defining an equilateral triangle

Mastering Skills & Concepts: Course V / Module 2: Fundamentals of Geometry

Sunshine State Standards: Grade Level Expectations	Unit: Triangles (continued)	Learning Objectives in Tutorial
Benchmark: MA. B. 1.3.2 **GLE** **Identifies the names angles according to their measures (including acute, right, obtuse, and straight) (obj. 2-4)** **Determines the measure of missing angle using angle relationships. (obj. 1)**	Classifying Triangles by Angles	1. Applying the triangle sum formula to find missing angle measures 2. Identifying right triangles 3. Identifying acute triangles 4. Identifying obtuse triangles
Sunshine State Standards: Grade Level Expectations	Volume and Surface Area	Learning Objectives in Tutorial
Benchmark: MA. B. 1.3.1 **GLE** **Seventh: Uses concrete or graphic models to create formulas for finding volumes of solids (prisms and cylinders) (obj. 3, 4)**	Calculating the Volume of a Right Triangular Prism	1. Classifying a prism according to its base 2. Identifying right prisms 3. Expressing the volume of a right triangular prism: V = ½ (bh)l 4. Calculating the volume of a right triangular prism
Benchmark: MA. B. 1.3.1 **GLE** **Seventh: uses concrete or graphic models to create formulas for finding surface area of prisms and cylinders. (obj. 1, 4)** **Benchmark: MA. C. 2.3.1.** **GLE** **Sixth: uses manipulatives and drawings to solve problems requiring spatial visualization** **Identifies and performs the various transformations (reflection, translation, rotation) of a given figure on a coordinate plane. (obj. 3)**	Calculating the Surface Area of a Right Triangular Prism	1. Defining the surface area of an object 2. Defining the faces of a right triangular prism 3. Recognizing a foldout for a right triangular prism 4. Calculating part of the surface area of a right triangular prism
Benchmark: MA. B. 1.3.1. **GLE** **Sixth: uses concrete and graphic models to discover an approximation for pie and creates a formula for finding circumference. (obj. 2)** **Uses concrete or graphic models to create formulas for finding volumes of solids (obj. 1)** **Seventh: Use concrete or graphic models to create formulas for finding surface area of prisms and cylinders. (obj. 3)**	Calculating the Volume and Surface Area of a Right Cylinder	1. Calculating the volume of a right cylinder 2. Calculating the circumference of a circle 3. Calculating the surface area of a right cylinder

Mastering Skills & Concepts: Course V / Module 3: Radicals & Exponents

Sunshine State Standards: Grade Level Expectations	Introduction to Radicals and Pythagorean Theorem	Learning Objectives in Tutorial
Benchmark: MA. C. 3.3.1 **GLE** **Seventh: creates and solves angles measurements for triangles. Demonstrates the Pythagorean relationship in right triangles using models or diagrams. Given two sides of a right triangle, uses the Pythagorean Theorem to find the length of the third side.**	Exploring the Pythagorean Theorem	1. Identifying the hypotenuse in a right triangle 2. Using variables to represent the Pythagorean Theorem 3. Identifying a right triangle given the measure of its sides
Benchmark: MA. A. 1.3.1 **Seventh: knows word names and standard number for integers, fractions, decimals, ratios, numbers expressed as percents, numbers with exponents, numbers expressed in scientific notation, and numbers expressed using the square root radical. (obj. 1, 2, 3)** **MA. B. 1.3.1** **GLE** **Seventh: Solves and explains real-world problems involving surface area and volume of three dimensional shapes. (obj. 4)**	Investigating Squares and Square Roots	1. Completing a table of square numbers up to 12 2. Determining the square roots of some perfect squares 3. Plotting squares and square roots on a number line 4. Investigating cubing a number and cube roots with reference to the volume of a cube
Benchmark: MA. C. 3.3.1 **GLE** **Seventh: Given two sides of a right triangle, using the Pythagorean theorem to find the length of the third side. (obj. 1)** **Benchmark MA. A. 1.3.1** **GLE** **Seventh: knows word names and standard number for integers, fractions, decimals, ratios, numbers expressed as percents, numbers with exponents, numbers expressed in scientific notation, and numbers expressed using the square root radical. (obj. 2)** **Benchmark: MA. A. 1.3.3.** **GLE** **Sixth: constructs models to represent rational numbers. (obj. 3)** **Seventh and Eighth: Knows examples of rational and irrational numbers in real-world situations (obj. 4)**	Defining Irrational Numbers	1. Fining the length of the 3rd side of a right triangle given the measures of 2 sides 2. Locating the square root of a number between consecutive integers 3. Recognizing irrational numbers as non-terminating, non-repeating decimals 4. Classifying numbers as either rational or irrational

Mastering Skills & Concepts: Course V / Module 3: Radicals & Exponents

Sunshine State Standards: Grade Level Expectations	Introduction to Scientific Notation	Learning Objectives in Tutorial
Benchmark MA. A. 1.3.1 **GLE** **Seventh: knows word names and standard number for integers, fractions, decimals, ratios, numbers expressed as percents, numbers with exponents, numbers expressed in scientific notation, and numbers expressed using the square root radical.**	Writing Numbers Using Scientific Notation	1. Writing a number using scientific notation
Benchmark MA. A. 1.3.1 **GLE** **Seventh: knows word names and standard number for integers, fractions, decimals, ratios, numbers expressed as percents, numbers with exponents, numbers expressed in scientific notation, and numbers expressed using the square root radical. (obj. 1)** **Benchmark: MA. A. 1.3.4** **GLE** **Seventh: Expresses a given quantity in a variety of ways (for example, integers, scientific notation....) (obj. 2, 3, 4)** **Benchmark: MA. A. 2.3.1.** **GLE** **Sixth: knows the meaning and use of exponential notation. (obj. 2)**	Comparing Numbers in Scientific Notation	1. Converting numbers from standard form to scientific notation 2. Recognizing that 1 kilo is equal to 10^3 3. Using the on-line calculator to express numbers in scientific notation 4. Comparing 2 numbers written in scientific notation
Benchmark: MA. A. 2.3.1. **GLE** **Sixth: Evaluates numerical expressions that contain exponential notation. (obj. 1, 2)** **Seventh: Expresses numbers in scientific notation as numbers in standard form. (obj. 3)**	Writing Numbers Between 0 and 1 in Scientific Notation	1. Writing a number between 0 and 1 in scientific notation 2. Exploring powers of 10 that are negative integers and zero 3. Converting numbers from scientific notation to standard form

Mastering Skills & Concepts: Course V / Module 4: Ratio and Proportion

Sunshine State Standards: Grade Level Expectations	Ratio	Learning Objectives in Tutorial
Benchmark: MA. A. 1.3.1 **GLE** **Eighth: knows word names and standard numerals for integers, fractions, decimals, numbers expressed as percents, scientific notation, absolute value, radicals, and ratio.** **Benchmark: MA. A. 1.3.2** **GLE** **Eighth: Compares and orders numbers expressed in absolute value, scientific notation, integers, percents, radicals, and ratios. (obj. 2.3)**	Defining Ratio	1. Defining the terms and symbols of a ratio 2. Expressing a ratio in lowest terms 3. Recognizing equivalent ratios
Benchmark: MA. A. 1.3.4. **GLE** **Seventh: Expresses a given quantity in a variety of ways (for example, integers, fractions, decimals, percents, scientific notation, ratios) (obj. 1, 2, 3)**	Expressing Ratios as Equivalent Fractions and Decimals	1. Using ratios to express parts of whole quantities 2. Expressing ratios in decimal form 3. Expressing ratios as percents
Benchmark: MA. A. 1.3.4. **GLE** **Seventh: Expresses a given quantity in a variety of ways (for example, integers, fractions, decimals, percents, scientific notation, ratios) (obj. 1, 2,)**	Forming Ratios Between Unlike Quantities	1. Forming ratios by comparing different quantities 2. Using a pie chart (circle graph) to represent ratios
Sunshine State Standards: Grade Level Expectations	Proportion	Learning Objectives in Tutorial
Benchmark: MA. A. 1.3.4. **GLE** **Seventh: Expresses a given quantity in a variety of ways (for example, integers, fractions, decimals, percents, scientific notation, ratios) (obj. 1, 2,)**	Defining a Proportion	1. Recognizing a proportion as an equivalence between ratios 2. Writing equivalent ratios as equivalent fractions
Benchmark: MA. A. 1.3.4. **GLE** **Seventh: Expresses a given quantity in a variety of ways (for example, integers, fractions, decimals, percents, scientific notation, ratios)** **Benchmark MA. D. 1.3.1** **GLE** **Eighth: uses variables to represent unknown quantities in real-world problems.**	Solving for a Variable in a Proportion	1. Setting up a proportion involving a variable 2. Solving for the variable in a proportion 3. Recognizing the means/extremes property: if a:b = c:d, then ad = bc 4. Identifying the means and the extremes in a proportion
Benchmark: MA. A. 1.3.4. **GLE** **Seventh: Expresses a given quantity in a variety of ways (for example, integers, fractions, decimals, percents, scientific notation, ratios)**	Applying the Means/Extremes Property	1. Solving for the variable in a proportion using cross-multiplication 2. Calculating cross-products to check a solution in a proportion 3. Converting standard units to metric units using proportions

Mastering Skills & Concepts: Course V / Module 4: Ratio and Proportion

Sunshine State Standards: Grade Level Expectations	Direct and Inverse Variation	Learning Objectives in Tutorial
	Exploring and Solving Direct Variation Problems	1. Recognizing a direct variation 2. Using the symbol for proportion to represent a direct variation 3. Expressing a direct variation as a proportion 4. Solving a proportion for a variable
	Exploring Inverse Variation	1. Recognizing an inverse variation 2. Using the symbol for proportion to represent an inverse relationship 3. Expressing an inverse relationship as a proportion 4. Writing an inverse variation as 2 equivalent products
	Solving Inverse Variation Problems	1. Solving an inverse relationship for a missing quantity 2. Comparing an inverse variation to a direct variation
Sunshine State Standards: Grade Level Expectations	Similar Polygons	Learning Objectives in Tutorial
Benchmark: MA. C. 2.3.1 **GLE** **Seventh: recognizes, draws, and describes congruent and similar figures (obj.1)** **Benchmark: MA. D. 2.3.1** **Sixth: uses variables to represent numbers and relationships. (obj. 2)**	Defining Similarity	1. Recognizing the meaning of similarity 2. Writing a proportion that can be used to solve for a variable
Benchmark: MA. C. 1.3.1 **GLE** **Seventh: compares and describes the attributes of regular and irregular polygons (obj. 1, 4)** **Benchmark: MA. C. 2.3.1** **GLE** **Seventh: recognizes, draws, and describes congruent and similar figures (obj.1, 3)**	Identifying Equivalent Ratios	1. Applying the definition of similarity to identify equivalent ratios 2. Identifying corresponding sides in similar polygons 3. Using similarity to set up proportions involving corresponding sides 4. Defining polygon

Mastering Skills & Concepts: Course V / Module 4: Ratio and Proportion

Sunshine State Standards: Grade Level Expectations	Similar Polygons (continued)	Learning Objectives in Tutorial
Benchmark: MA. C. 3.3.1 **GLE** **Seventh: creates and solves angles measurements for triangles. (obj. 1)** **Demonstrates the Pythagorean relationship in right triangles using models or diagrams. (obj. 2)** **Given two sides of a right triangle, uses the Pythagorean Theorem to find the length of the third side. (obj. 4)** **Benchmark: MA. A. 1.3.4.** **GLE** **Seventh: Expresses a given quantity in a variety of ways (for example, integers, fractions, decimals, percents, scientific notation, ratios) (obj. 3)**	Setting Up and Solving Proportions in Similar Polygons	1. Recognizing a right triangle 2. Applying the Pythagorean Theorem to find the third side of a right triangle 3. Setting up and solving equations based on ratios between corresponding sides 4. Using scaling to determine corresponding lengths in similar polygons

Mastering Skills & Concepts: Course V / Module 5: Fundamentals of Statistics

Sunshine State Standards: Grade Level Expectations	Interpreting and Constructing Graphs	Learning Objectives in Tutorial
MA. E. 1.3.1 **GLE** **Seventh: constructs, interprets, and explains displays of data, such as tables and graphs (obj. 1, 2, 3)** **Eighth: constructs and interprets displays data (including circle, line, bar, and box and whiskers graphs) (obj. 1, 2, 3)**	Exploring Line Graphs	1. Interpreting a line graph 2. Adding points to a line graph 3. Identifying increasing and decreasing trends on a line graph
MA. E. 1.3.1. **GLE** **Sixth, seventh, and eighth: constructs, interprets and explains displays of data such as tables and graphs (single-and multiple-bar graphs and single- and multiple- line graphs). (obj. 1, 2, 6)** **MA. C. 3.3.2.** **GLE** **Sixth: identifies the x and y axes in a coordinate plane and identifies the coordinates of a given point in the first quadrant.** **Plots specific points in the first quadrant of the Cartesian coordinate system.** **Eighth: given the graph of a line, identifies the slope of the line (including the slope of vertical and horizontal lines)**	Exploring Bar Graphs	1. Interpreting a bar graph 2. Identifying data sets 3. Identifying the horizontal and vertical axes 4. Identifying the range of a data set 5. Creating a scale along an axis 6. Constructing a bar graph 7. Using a broken axis to scale data
Benchmark: MA. E. 1.3.1 **GLE** **Sixth: reads and analyzes data displayed in a variety of forms (charts, pictographs, stem and leaf plots). (obj. 1, 3)** **Eighth: Constructs and interprets displays of data, (including circle, line, bar, and box-and-whiskers graphs). (obj. 1, 3)**	Interpreting Pie Charts	1. Interpreting a pie chart 2. Converting raw data to percents 3. Finding the number of degrees in a sector 4. Creating a sector using a protractor 5. Constructing a pie chart

Mastering Skills & Concepts: Course V / Module 5: Fundamentals of Statistics

Sunshine State Standards: Grade Level Expectations	The Mean, Median, and Mode	Learning Objectives in Tutorial
Benchmark: MA. E. 1.3.2. **Sixth: Organizes items in a set of data (obj. 1)** **Describes real world data by applying and explaining appropriate procedures for finding measures of central tendency. (obj. 3)** **Find the range, mean ,median, and mode of a set of data. (obj. 4, 5)** **Benchmark: MA. E. 1.3.3.** **Sixth: Describes a set by using the measures of central tendency. (obj. 3)**	Defining the Mean and Median	1. Defining raw data 2. Defining a sample 3. Naming the 3 measures of central tendency 4. Defining the mean 5. Defining the median
Benchmark: MA. E. 1.3.2. **Find the range, mean, median, and mode of a set of data. (obj. 1)** **Benchmark MA. E.. 1.3.3** **Seventh: applies and analyzes appropriate measures of central tendency (mode, mean, median, range) for a set of data. (obj. 2)**	Defining the Mode	1. Defining the mode 2. Interpreting which measure best represents the 'average' for a given set of data
Benchmark: MA. E. 1.3.2. **Find the range, mean, median, and mode of a set of data. (obj. 1)** **Benchmark MA. E. 1.3.3** **Seventh: applies and analyzes appropriate measures of central tendency (mode, mean, median, range) for a set of data. (obj. 2)**	Calculating the Mean, Median, and Mode	1. Calculating the mean 2. Calculating the median 3. Determining the mode 4. Interpreting which measure best represents the 'average' for a given set of data
Sunshine State Standards: Grade Level Expectations	Frequency Distribution	Learning Objectives in Tutorial
Benchmark: MA. E. 1.3.2 **GLE** **Sixth: Organizes items in a set of data. (obj. 1)** **Eighth: Calculates the mean, median, and mode of a set of data using raw data, tables, charts, or graphs. (obj. 2, 3)** **Benchmark: MA. E. 1.3.1** **GLE** **Sixth–Seventh: Generates and collects data for analysis (obj. 1)**	Creating and Interpreting a Frequency Table	1. Using tally marks to create a frequency table 2. Constructing a frequency distribution 3. Calculating the mean using the frequency data

Mastering Skills & Concepts: Course V / Module 5: Fundamentals of Statistics

Sunshine State Standards: Grade Level Expectations	Frequency Distribution (continued)	Learning Objectives in Tutorial
Benchmark: MA. E. 1.3.1 **GLE** **Eighth: Reads and interprets data displayed in a variety of forms including histograms. (obj. 2, 3)** **Benchmark: MA. E. 1.3.2** **GLE** **Eighth: find the mean, median, mode, of a set of data using raw data, tables, charts, or graphs. (obj. 4)**	Defining a Histogram	1. Dividing data into equal intervals to create a grouped frequency table 2. Defining a histogram 3. Creating a histogram for the frequency data 4. Finding the mean of a grouped frequency
Benchmark: MA. E. 1.3.1 **GLE** **Sixth: Reads and analyzes data displayed in a variety of forms (charts, pictographs, stem-and leaf plots). (obj. 1-3)**	Exploring Cumulative Frequency Graphs	1. Calculating and plotting cumulative frequencies on a graph 2. Identifying a best-fit curve for the points on a cumulative frequency graph 3. Finding a specified percentile using a cumulative frequency graph

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Sunshine State Standards: Grade Level Expectations	Simple Probability	Learning Objectives in Tutorial
Benchmark: MA. E. 2.3.1 **GLE** **Sixth: Determine all possible outcomes of an event using a tree diagram or organized list. (obj. 1)** **Uses manipulatives to obtain experimental results, compares results to mathematical expectations and discusses the validity of the experiment. (obj. 4)**	Defining and Expressing Probability	1. Defining the probability of an outcome in an experiment 2. Recognizing that the sum of the probabilities of all possible outcomes in an experiment is 1 3. Recognizing that the probability of an impossible outcome is 0 4. Defining the sample space for an experiment 5. Expressing probabilities as fractions and percents
Benchmark: MA. E. 2.3.1 **GLE** **Sixth: Calculates simple mathematical probabilities (obj. 2)** **Uses manipulatives to obtain experimental results, compares results to mathematical expectations and the validity of experiments (obj. 1, 2)**	Calculating Probabilities on a Color Wheel	1. Determining the sample space on a color wheel 2. Calculating the probabilities of different outcomes when spinning a color wheel
Benchmark: MA. E. 2.3.1 **GLE** **Sixth: Calculates simple mathematical probabilities** **Uses manipulatives to obtain experimental results, compares results to mathematical expectations and the validity of experiments**	Determining Probability of Complementary Events	1. Calculating the probabilities of different outcomes when spinning a color wheel

Mastering Skills & Concepts: Course V / Module 6: Fundamentals of Probability

Sunshine State Standards: Grade Level Expectations	Probability of Combined Events	Learning Objectives in Tutorial
Benchmark: MA. E. 2.3.1 **GLE** **Sixth: Calculate simple mathematical probabilities (obj. 3, 4)** **Determine all possible outcomes of an event using a tree diagram or organized list (obj 2)** **Seventh and Eighth: Calculate simple mathematical probabilities for independent and dependent events (obj. 4)**	Calculating the Probability of Independent Events	1. Identifying independent events 2. Determining the sample space of an experiment using a table 3. Calculating the probability of an event 4. Calculating the probability of independent events
	Determining the Sample Space of an Experiment	1. Determining the probability of a certainty 2. Recognizing mutually exclusive events 3. Determining the sample space of an experiment using a table
Benchmark: MA. E. 2.3.1 **GLE** **Sixth: Determines all possible outcomes of an event using a tree diagram or organized list (obj. 1)** **Seventh and eighth: Calculate simple mathematical probabilities for independent and dependent events (obj. 2, 3)**	Calculating the Probability of Dependent Events	1. Using a tree diagram to determine probabilities 2. Identifying dependent events 3. Calculating the probability of dependent events 4. Verifying the probability formulas using a tree diagram