

Topic	Lesson	Objective1	Objective2
Variables and Expressions			
	Problem Solving: Using a Problem-Solving Plan	Use a four-step plan to solve problems.	Choose an appropriate method of computation.
	Numbers and Expressions	Use the order of operations to evaluate expressions.	Translate verbal phrases into numerical expressions.
	Variables and Expressions	Evaluate expressions containing variables.	Translate verbal phrases into algebraic expressions.
	Writing Algebraic Expressions	Write algebraic expressions.	
	The Order of Operations	Use the order of operations to evaluate expressions.	Use grouping symbols.
	Properties	Identify and use properties of addition and multiplication.	Use properties of addition and multiplication to simplify algebraic expressions.
Integers			
	Integers and Absolute Value	Represent, graph, and order integers.	Find opposites and absolute values.
	Adding Integers	Use models to add integers.	Use rules to add integers.
	Subtracting Integers	Use models to subtract integers.	Use rules to subtract integers.
	Multiplying and Dividing Integers	Multiply integers using repeated addition, patterns, and rules.	Divide integers using rules.
	Graphing on a Coordinate Plane	Graph points and lines on the coordinate plane.	
	Interpreting Graphs and Tables	Learn to interpret information given in a graph or a table.	Make a graph to solve problems.
	Problem Solving: Account for All Possibilities	Find number patterns.	Use patterns to solve real-world problems.
Equations			
	The Distributive Property	Use the distributive property to write equivalent numerical expressions.	Use the distributive property to write equivalent algebraic expressions.
	Simplifying Algebraic Expressions	Use the distributive property to simplify algebraic expressions.	
	Solving Equations by Adding or Subtracting	Solve equations by using the subtraction property of equality.	Solve equations by using the addition property of equality.
	Solving Equations by Multiplying or Dividing	Solve equations by using the division property of equality.	Solve equations by using the multiplication property of equality.
	Solving Two-Step Equations	Solve two-step equations.	

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	Writing Two-Step Equations	Write verbal sentences as two-step equations.	Solve verbal problems by writing and solving two-step equations.
	Problem Solving: Look for a Pattern	Find number patterns.	
	Using Formulas	Solve problems by using formulas.	Solve problems involving the perimeters and areas of rectangles.
Number Theory			
	Divisibility and Factors	Use divisibility test.	Find factors.
	Exponents	Use exponents.	Use the order of operations with exponents.
	Prime Factorization and Greatest Common Factor	Find the prime factorization of a number.	Find the greatest common factor of two or more numbers.
	Simplifying Fractions	Find equivalent fractions.	Write fractions in simplest form.
	Precision and Significant Digits	Indicate the precision of a measurement.	Use significant digits.
	Greatest Possible Error	Find the greatest possible error for a measurement.	
	Exponents and Multiplication	Multiply powers with the same base.	Find a power of a power.
	Exponents and Division	Divide expressions containing exponents.	Simplifying expressions with integer exponents.
	Problem Solving: Try, Test, Revise	Solve a problem using the Try, Test, Revise strategy.	Solve real-world problems involving money.
	Scientific Notation	Write and evaluate numbers in scientific notation.	Calculate with scientific notation.
	Negative Exponents	Write expressions using negative exponents.	Evaluate numerical expressions containing negative exponents.
Rational Numbers			
	Rational Numbers	Write rational numbers in equivalent forms.	
	Comparing and Ordering Fractions	Find the least common multiple.	Compare fractions.
	Writing Fractions as Decimals	Write fractions as terminating or repeating decimals.	Compare fractions and decimals.
	Adding and Subtracting Rational Numbers	Add and subtract decimals and rational numbers with like denominators.	
	Multiplying Rational Numbers		
	Dividing Rational Numbers	Divide fractions.	
	Adding and Subtracting with Unlike Denominators	Add and subtract fractions with unlike denominators.	
	Solving Equations with Rational Numbers	Solve equations with rational numbers.	

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	Square and Square Roots	Find square roots.	
	Finding Square Roots	Estimate square roots to a given number of decimal places and solve problems using square roots.	
	Problem Solving: Work Backwards	Solve problems by working backward.	
Ratio, Proportion and Percent			
	Ratios and Rates	Write ratios as fractions in simplest form.	Determine unit rates.
	Using Proportions	Solve proportions.	Use proportions to solve real-world problems.
	Converting Between Measurement Systems	Use a conversion factor to convert measurements between systems.	
	Similar Figures	Determine whether figures are similar, use scale factors, and find missing dimensions in similar figures.	
	Scale Drawings and Models	Use scale drawings.	Construct scale drawings.
	Problem Solving: Make a Table	Solve problems by making a table.	
	Fractions, Decimals, and Percents	Express percents as fractions and vice versa.	Express percents as decimals and vice versa.
	Using the Percent Proportion	Use the percent proportion to solve problems.	
	Finding Percents Mentally	Compute mentally with percents.	Estimate with percents.
	Using Percent Equations	Solve percent problems using percent equations.	Solve real-life problems involving discount and interest.
	Percent of Change	Find percent of increase.	Find percent of decrease.
	Markup and Discount	Find mark-ups.	Find discounts.
	Compound Interest	Compute compound interest.	
Equations and Inequalities			
	Combining Like Terms	Combine like terms in an expression.	
	Solving Multi-Step Equations	Combine like terms to simplify an equation.	Use the distributive property to simplify an equation.
	Solving Equations with Variables on Both Sides	Solve equations with variables on both sides.	Use equations with variables on both sides.
	Solving Equations with Grouping Symbols	Solve equations that involve grouping symbols.	Identify equations that have no solution or an infinite number of solutions.
	Inequalities and Their Graphs	Graph inequalities.	Write inequalities.
	Solving Inequalities by Adding and Subtracting	Solve one-step inequalities using subtraction.	Solve one-step inequalities using addition.

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	Solving Inequalities by Multiplication and Division	Solve one-step inequalities using division.	Solve one-step inequalities using multiplication.
	Solving Multi-Step Inequalities	Solve two-step inequalities and graph the solutions of an inequality on a number line.	
	Solving for a Variable	Solve an equation for a variable.	
	Systems of Equations	Solve systems of equations.	
Functions and Graphing			
	Relations	Use tables and graphs to represent relations.	
	Functions	Determine whether relations are functions.	Use functions to describe relationships between two quantities.
	Writing Rules for Linear Functions	Write a function rule for a word relationship.	Write a function rule by analyzing a table or graph.
	Linear Equations and Two Variables	Solve linear equations with two variables.	Graph linear equations using ordered pairs.
	Graphing Linear Equations Using Intercepts	Find the x- and y-intercepts of graphs.	Graph linear equations using the x- and y-intercepts.
	Slope	Find the slope of a line.	
	Rate of Change	Find rates of change.	Solve problems involving direct variation.
	Slope-Intercept Form	Determine slopes and y-intercepts of lines.	Graph linear equations using the slope and y-intercept.
	Writing Linear Equations	Write equations given the slope and y-intercept, a graph, a table, or two points.	
	Graphing Inequalities	Graph linear inequalities.	Describe solutions of linear inequalities.
Spatial Thinking			
	Points, Lines and Planes	Name basic geometric figures.	Recognize intersecting lines, parallel lines, and skew lines.
	Angle Relationships and Parallel Lines	Identify adjacent and vertical angles.	Relate angles formed by parallel lines and a transversal.
	Classifying Polygons	Classifying triangles.	Classifying quadrilaterals.
	Draw a Diagram	Draw a diagram to solve a problem.	
	Angles of a Polygon	Determine the sum of the measures of the angles of an n-gon.	
	Congruence	Identify corresponding parts of congruent triangles.	Determine whether triangles are congruent.
	Circles	Find circumferences.	Find central angles and make circle graphs.

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	Translations	Graph translations.	Describe translations.
	Symmetry and Reflections	Identify a line of symmetry.	Graph a reflection of a geometric figure.
	Rotations	Graph rotations.	Identify rotational symmetry.
Area and Volume			
	Area: Parallelograms	Find areas of rectangles.	Find areas of parallelograms.
	Area: Triangles and Trapezoids	Find areas of triangles.	Find areas of trapezoids.
	Area: Circles	Find areas of circles.	Find areas of irregular figures that include parts of circles.
	Space Figures	Identify common space figures.	Identify space figures from nets.
	Surface Area: Prisms and Cylinders	Find surface areas of prisms.	Find surface areas of cylinders.
	Surface Area: Pyramids, Cones and Spheres	Find surface areas of pyramids.	Find surface areas of cones and spheres.
	Volume: Prisms and Cylinders	Find the volumes of prisms.	Find the volumes of cylinders.
	Problem Solving: Make a Model	Make a model.	
	Volume: Pyramids, Cones and Spheres	Find volumes of cones and pyramids.	Find volumes of spheres.
Right Triangles in Algebra			
	Square Roots and Irrational Numbers	Find square roots of numbers.	Classify real numbers.
	Triangles	Find the missing angle measure of a triangle.	Classify triangles by angles and by sides.
	The Pythagorean Theorem	Use the Pythagorean Theorem.	Identify right triangles.
	Distance and Midpoint Formulas	Find the distance between two points using the Distance Formula.	Find the midpoint of a segment using the Midpoint Formula.
	Write a Proportion	Write a proportion from similar triangles.	
	Special Right Triangles	Use the relationships in 45° - 45° - 90° triangles.	Use the relationships in 30° - 60° - 90° triangles.
	Square Roots of Expression with Variables	Find and simplify square roots of expressions containing variables.	
	Sine, Cosine, and Tangent Ratios	Find trigonometric ratios in right triangles.	Use trigonometric ratios to solve problems.
	Angles of Elevation and Depression	Use trigonometry to find angles of elevation.	Use trigonometry to find angles of depression.
Statistics			
	Samples and Surveys	Recognize biased samples and identify sampling methods.	
	Organizing Data	Organize data in tables and stem-and-leaf plots.	
	Venn Diagrams	Use a Venn Diagram to clarify relationships.	
	Measures of Central Tendency	Find appropriate measures of central tendency.	
	Variability	Find measures of variability.	

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	Displaying Data	Display data in bar graphs, histograms, and line graphs.	
	Misleading Graphs	Recognize misleading graphs and statistics.	
	Scatter Plots	Create and interpret scatter plots.	
	Problem Solving: Solve by Graphing	Solve problems by graphing.	
	Average Deviation	Find the average deviation of a data set.	
Probability			
	Probability	Find the probability of an event by using the definition of probability.	
	Experimental Probability	Estimate probability using experimental methods.	
	Theoretical Probability	Estimate probability using theoretical methods.	
	The Fundamental Counting Principle	Find the number of possible outcomes in an experiment.	
	Permutations and Combinations	Find permutations and combinations.	
	Independent and Dependent Events	Find the probabilities of independent and dependent events.	
	Odds	Convert between probabilities and odds.	
	Problem Solving: Simulate the Problem	Solve problems by simulation.	
Sequences			
	Arithmetic Sequences	Find terms in an arithmetic sequence.	
	Geometric Sequences	Find terms in a geometric sequence.	
	Other Sequences	Find patterns in sequences.	
Polynomials and Nonlinear Functions			
	Graphing Nonlinear Functions	Graph quadratic functions.	Graph absolute value functions.
	Exponential Growth and Decay	Use tables, rules, and graphs with functions modeling growth.	Use tables, rules and graphs with functions modeling decay.
	Polynomials	Identify polynomials.	Evaluate polynomials.
	Adding and Subtracting Polynomials	Add polynomials.	Subtract polynomials.
	Multiplying a Polynomial by a Monomial	Use an area model for multiplication.	Write a polynomial as the product of a monomial and a polynomial.
	Multiplying Binomials	Use models in multiplying binomials.	Multiply two binomials.
	Problem Solving: Use Multiple Strategies	Solve problems by combining strategies.	
	Dividing Polynomials by Monomials	Learn to divide polynomials by monomials.	