

Math 8

Strand	Common Curriculum Goal	Standard	Lesson Name
8.1. Core Content: Linear functions and equations (Algebra)		8.1.A Solve one-variable linear equations.	Lesson 4 Equations, Lesson 9 Equations with Fractions and Decimals, Lesson 12 Percents and Equations
		8.1.B Solve one- and two-step linear inequalities and graph the solutions on the number line.	Lesson 5 Inequalities, Lesson 14 Solving Multi Step Inequalities
		8.1.C Represent a linear function with a verbal description, table, graph, or symbolic expression, and make connections among these representations.	Lesson 16 Arithmetic and Geometric Sequences, Lesson 22 Functions, Lesson 23 Graphing Linear Equations
		8.1.D Determine the slope and y-intercept of a linear function described by a symbolic expression, table, or graph.	Lesson 23 Graphing Linear Equations
		8.1.E Interpret the slope and y-intercept of the graph of a linear function representing a contextual situation.	Lesson 23 Graphing Linear Equations
		8.1.F Solve single- and multi-step word problems involving linear functions and verify the solutions.	Lesson 9 Equations with Fractions and Decimals, Lesson 10 Ratios, Proportions and Percents, Lesson 11 Similarity and Scale, Lesson 13 Solving Multi-Step Equations, Lesson 14 Solving Multi-Step Inequalities
		8.1.G Determine and justify whether a given verbal description, table, graph, or	Lesson 16 Arithmetic and Geometric Sequences, Lesson 22 Functions, Lesson

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		symbolic expression represents a linear relationship.	23 Graphing Linear Equations
8.2. Core Content: Properties of geometric figures (Numbers, Geometry/Measurement)		8.2.A Identify pairs of angles as complementary, supplementary, adjacent, or vertical, and use these relationships to determine missing angle measures.	Lesson 25 Angles
		8.2.B Determine missing angle measures using the relationships among the angles formed by parallel lines and transversals.	Lesson 25 Angles
		8.2.C Demonstrate that the sum of the angle measures in a triangle is 180 degrees, and apply this fact to determine the sum of the angle measures of polygons and to determine unknown angle measures.	Lesson 24 Polygons, Lesson 32 Triangles and Triangular Prisms
		8.2.D Represent and explain the effect of one or more translations, rotations, reflections, or dilations (centered at the origin) of a geometric figure on the coordinate plane.	Lesson 27 Symmetry and Transformations
		8.2.E Quickly recall the square roots of the perfect squares from 1 through 225 and estimate the square roots of other positive numbers.	Lesson 33 Square Roots and Irrational Numbers
		8.2.F Demonstrate the Pythagorean Theorem	Lesson 34 Pythagorean

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		and its converse and apply them to solve problems.	Theorem
		8.2.G Apply the Pythagorean Theorem to determine the distance between two points on the coordinate plane.	Lesson 34 Pythagorean Theorem
8.3. Core Content: Summary and analysis of data sets (Algebra, Data/Statistics/Probability)		8.3.A Summarize and compare data sets in terms of variability and measures of center.	Lesson 35 Descriptive Statistics, Lesson 36 Inferential Statistics
		8.3.B Select, construct, and analyze data displays, including box-and-whisker plots, to compare two sets of data.	Lesson 36 Inferential Statistics
		8.3.C Create a scatterplot for a two-variable data set, and, when appropriate, sketch and use a trend line to make predictions.	Lesson 36 Inferential Statistics
		8.3.D Describe different methods of selecting statistical samples and analyze the strengths and weaknesses of each method.	Lesson 35 Descriptive Statistics
		8.3.E Determine whether conclusions of statistical studies reported in the media are reasonable.	Lesson 35 Descriptive Statistics, Lesson 36 Inferential Statistics
		8.3.F Determine probabilities for mutually exclusive, dependent, and independent events for small sample spaces.	Lesson 19 Probability, Lesson 20 Counting Theory
		8.3.G Solve single- and multi-step problems using counting techniques	Lesson 20 Counting Theory

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		and Venn diagrams and verify the solutions	
8.4. Additional Key Content (Numbers, Operations)		8.4.A Represent numbers in scientific notation, and translate numbers written in scientific notation into standard form.	Lesson 7 Scientific Notation
		8.4.B Solve problems involving operations with numbers in scientific notation and verify solutions.	Lesson 7 Scientific Notation
		8.4.C Evaluate numerical expressions involving non-negative integer exponents using the laws of exponents and the order of operations.	Lesson 1 Number Sense, Lesson 2 Variables and Expressions, Lesson 6 Exponents
		8.4.D Identify rational and irrational numbers.	Lesson 10 Ratios, Proportions and Percents, Lesson 33 Square Roots and Irrational Numbers
8.5. Core Processes: Reasoning, problem solving, and communication		8.5.A Analyze a problem situation to determine the question(s) to be answered.	Lesson 10 Ratios, Proportions and Percents, Lesson 24 Polygons, Lesson 25 Angles, Lesson 30 Surface Area, Lesson 31 Volume, Lesson 32 Triangles and Triangular Prisms
		8.5.B Identify relevant, missing, and extraneous information related to the solution to a problem.	Lesson 25 Angles, Lesson 26 Circles and Pi, Lesson 28 Parallelograms, Lesson 30 Surface Area, Lesson 31 Volume
		8.5.C Analyze and compare mathematical strategies for solving problems, and select and use one or more strategies to solve a problem.	Lesson 3 Properties of Numbers, Lesson 10 Ratios, Proportions and Percents, Lesson 11 Similarity and Scale, Lesson 20 Counting

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			Theory, Lesson 26 Circles and Pi, Lesson 35 Descriptive Statistics
		8.5.D Represent a problem situation, describe the process used to solve the problem, and verify the reasonableness of the solution.	Lesson 10 Ratios, Proportions and Percents, Lesson 13 Solving Multi-Step Equations, Lesson 14 Solving Multi-Step Inequalities, Lesson 30 Surface Area, Lesson 31 Volume
		8.5.E Communicate the answer(s) to the question(s) in a problem using appropriate representations, including symbols and informal and formal mathematical language.	Lesson 21 Coordinate Plane, Lesson 29 Measurement Systems, Lesson 30 Surface Area, Lesson 31 Volume
		8.5.F Apply a previously used problem-solving strategy in a new context.	Lesson 18 Transforming Formulas, Lesson 28 Parallelograms, Lesson 29 Measurement Systems, Lesson 30 Surface Area, Lesson 31 Volume
		8.5.G Extract and organize mathematical information from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.	Lesson 16 Arithmetic and Geometric Sequences, Lesson 17 Data Analysis, Lesson 36 Inferential Statistics
		8.5.H Make and test conjectures based on data (or information) collected from explorations and experiments.	Lesson 35 Descriptive Statistics, Lesson 36 Inferential Statistics