

Options EHS Geometry B-OR		Scope and Sequence
Unit	Lesson	Objectives
Quadrilaterals and Coordinate Algebra		
Classifying Quadrilaterals		
		Classify and describe relationships within the family of quadrilaterals.
		Describe real-world objects using characteristics of quadrilaterals.
		Solve mathematical problems using characteristics of quadrilaterals.
		Solve real-world problems using characteristics of quadrilaterals.
Parallelograms		
		Complete the steps to prove theorems about properties of parallelograms.
		Apply properties of parallelograms to solve problems.
Special Parallelograms		
		Complete the steps to prove theorems about properties of parallelograms.
		Apply properties of rhombi to solve mathematical and real-world problems.
		Apply properties of rectangles to solve mathematical and real-world problems.
		Apply properties of squares to solve mathematical and real-world problems.
Trapezoids and Kites		
		Complete proofs involving properties of trapezoids and kites.
		Apply properties of trapezoids to solve mathematical and real-world problems.
		Apply properties of kites to solve mathematical and real-world problems.
Figures in the Coordinate Plane		
		Apply coordinate algebra proofs to triangles and quadrilaterals.
		Calculate the perimeter of a triangle or quadrilateral given the coordinates of the vertices.
Unit Test		

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Areas of Figures		
Rewriting Expressions with Radicals		
		Use operations to rewrite expressions involving radicals.
Adding and Subtracting Radicals		
		Identify like radicals.
		Add and subtract radical expressions.
Rewriting Expressions with Radicals		
		Use operations to rewrite expressions involving radicals.
Angle Measures of Polygons		
		Identify and describe polygons.
		Apply the polygon interior angle sum theorem to solve problems.
		Apply the polygon exterior angle sum theorem to solve problems.
Area of Regular Polygons		
		Calculate the length of the apothem of a regular polygon.
		Calculate the area of a regular polygon.
		Solve real-world problems involving the area of regular polygons.
Area of Triangles and Parallelograms		
		Solve problems involving areas of triangles and parallelograms.
Perimeter and Area of Rhombi, Trapezoids, and Kites		
		Solve problems involving the area of a rhombus, trapezoid, and kite.
		Solve problems involving the area of a rhombus, trapezoid, and kite given the coordinates of the vertices.

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		Calculate the perimeter of a rhombus, trapezoid, or kite given the coordinates of the vertices.
	Area of Composite Figures	
		Decompose composite 2-D figures.
		Write an expression that represents the area of a composite 2-D figure.
		Calculate the area of composite 2-D figures, including real-world applications.
	Density and Design Problems	
		Solve problems involving density of an area.
		Use geometric concepts to solve design problems.
	Test	
Volume of Figures		
	Volume of Prisms	
		Write expressions to represent the volumes or unknown measures of right and oblique prisms.
		Calculate the volume or an unknown measure of a right prism based on a mathematical or real-world model.
		Calculate the volume or an unknown measure of an oblique prism based on a mathematical or real-world model.
	Volume of Pyramids	
		Write expressions to represent the volumes or unknown measures of right and oblique pyramids.
		Calculate the volume or an unknown measure of a right pyramid based on a mathematical or real-world model.
		Calculate the volume or an unknown measure of an oblique pyramid based on a mathematical or real-world model.
	Volume of Cylinders, Cones, and Spheres	
		Write expressions to represent the volumes or unknown measures of cylinders and cones.
		Solve mathematical and real-world problems involving the volume of right and oblique cylinders.
		Solve mathematical and real-world problems involving the volume of right and oblique cones.

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		Solve mathematical and real-world problems involving the volume of spheres.
	Surface Area	
		Solve mathematical and real-world problems involving lateral area of prisms, cylinders, pyramids, and cones.
		Solve mathematical and real-world problems involving surface area of prisms, cylinders, cones, spheres, and pyramids.
		Solve mathematical and real-world problems about lateral and surface areas of composite figures.
	Cavalieri's Principle and Volume of Composite Figures	
		Write an expression to represent the volume of a composite figure.
		Calculate the volumes of composite figures, including those that model real-world objects.
	Three-Dimensional Figures and Cross Sections	
		Classify a 3-D figure and identify the characteristics (base, edge, etc.).
		Determine the horizontal and vertical cross-sections of 3-D figures.
		Determine the 3-D figure generated by a rotation of a 2-D figure.
	Unit Test	
	Trigonometric Ratios	
	Special Right Triangles	
		Complete the steps to prove special right triangle theorems.
		Determine unknown measures of 45° - 45° - 90° triangles.
		Determine unknown measures of 30° - 60° - 90° triangles.
		Solve real-world problems involving special right triangles.
	Right Triangle Trigonometry	
		Use the Pythagorean theorem, and the trigonometric functions and their inverses to solve right triangles.

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		Use special right triangle relationships to solve right triangles.
	Trigonometric Ratios	
		Given an acute angle of a right triangle, label the hypotenuse, opposite, and adjacent sides.
		Given an acute angle of a right triangle, write ratios for sine, cosine, and tangent.
		Relate trigonometric ratios of similar triangles and the acute angles of a right triangle.
	Solving for Side Lengths of Right Triangles	
		Write equations using trigonometric ratios that can be used to solve for unknown side lengths of right triangles.
		Solve for unknown side lengths of right triangles using trigonometric ratios.
		Apply trigonometric ratios to solve real-world problems.
	Solving for Angle Measures of Right Triangles	
		Write equations that can be used to solve for unknown angles in right triangles.
		Solve for unknown angles of right triangles using inverse trigonometric functions.
		Apply inverse trigonometric functions to solve real-world problems.
	Introduction to Circles	
		Complete the steps to prove that all circles are similar.
		Identify and describe terms related to circles.
		Calculate the degree measure of an arc using the arc addition postulate.
	Central Angles	
		Identify congruent central angles, chords, and arcs.
		Determine the measures of central angles, chords, and arcs using theorems about angle, chord, and arc congruency.
		Solve problems using the radius tangent theorem and its converse.

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	Circumference and Arc Length	
		Solve problems involving circumference of a circle.
		Determine the radian measure of a central angle.
		Solve problems involving arc length with central angles measured in degrees.
		Solve problems involving arc length with central angles measured in radians.
	Secants, Tangents, and Angles	
		Solve problems involving angles formed by two intersecting chords.
		Solve problems involving angles formed by two secants that intersect outside a circle.
		Solve problems involving angles formed by two intersecting tangents.
		Solve problems involving angles formed by a secant and a tangent that intersect outside a circle.
	Area of a Circle and a Sector	
		Solve problems involving area of a circle.
		Solve problems involving area of a sector with central angles measured in radians.
		Solve problems involving area of a sector with central angles measured in degrees.
	Equation of a Circle	
		Identify the center and radius from the equation of a circle, including equations given in general form.
		Determine the equation of a circle.
		Determine if a given point lies on a circle.
	Unit Test	
	Distributions and Proportions	
	Properties of Probability Distributions	
		Identify properties of a probability distribution.

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		Create probability distributions from a data set.
		Solve problems using probability distributions.
	Introduction to Normal Distributions	
		Describe normal distributions using the mean and standard deviation.
		Apply the z-score formula to solve problems.
		Solve problems using the empirical rule.
	Applications with Standard Normal Distribution	
		Solve problems using the standard normal table.
	Introduction to Confidence Intervals	
		Calculate the value of a point estimate and/or the margin of error of a given confidence interval.
		Interpret a confidence interval.
		Evaluate a claim about a population parameter given a confidence interval.
	Estimating a Population Proportion	
		Construct a confidence interval for a population proportion.
		Evaluate a claim about a population proportion based upon a calculated confidence interval.
		Calculate the minimum sample size that is needed to construct a confidence interval for a population proportion with a given confidence level and a given margin of error.
	Statistical Inferences	
		Make inferences about a population from a sample.
	Hypothesis Testing	
		Perform hypothesis tests on normally distributed data.
		Determine if a result is statistically significant.

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	Test	
Cumulative Exam		
	Cumulative Exam Review	
	Cumulative Exam	