Options FRMS Math 8B-OR		Scope and Sequence
Unit	**Lesson**	**Objectives**
Pythagorean Theorem		
	Exploring the Pythagorean Theorem	
		Recognize perfect squares.
		Identify sets of Pythagorean triples.
		Apply the Pythagorean theorem using Pythagorean triples as the side lengths.
		Use Pythagorean triples to determine if a triangle is a right triangle.
	Estimating and Comparing Square Roots	
		Estimate square roots without using technology.
		Plot the estimated values of square roots on a number line.
		Make comparative statements involving square roots.
	Finding the Hypotenuse in Right Triangles	
		Use the Pythagorean theorem to find the length of the hypotenuse of a right triangle.
		Approximate the length of the hypotenuse of a right triangle to solve real-world problems.
	Unknown Leg Lengths in Right Triangles	
		Given the length of one leg and the hypotenuse of a right triangle, use the Pythagorean theorem to find the length of the other leg.
		Approximate the length of a leg of a right triangle to solve real-world problems.
	Converse to the Pythagorean Theorem	
		Determine if a triangle is a right triangle by using the converse of the Pythagorean theorem.
	Finding Distance in the Coordinate Plane	
		Apply the Pythagorean theorem to find the distance between two points on the coordinate plane.
		Generate and use the distance formula to find the distance between two points on the coordinate plane.

Options FRMS Math 8B-OR		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Performance Task: Architectural Works and Wonders	
	Unit Test	
Transformations		
	Congruence	
		Determine the congruence of figures by measuring corresponding sides and angles.
		Identify and write corresponding parts of congruent figures.
	Overview of Transformations	
		Identify types of transformations.
		Relate the result of a transformation to the original figure.
	Translations	
		Identify and describe a translation on the coordinate plane.
		Translate figures on the coordinate plane given as an ordered pair and verbal expression.
		Describe a translation using coordinates.
	Reflections	
		Identify and describe a reflection on the coordinate plane.
		Reflect figures on the coordinate plane given the line of reflection.
		Describe a reflected figure using the line of reflection and coordinates.
	Rotations	
		Identify the image of a figure after a given rotation.
		Analyze a graph to determine the angle and direction of rotation of a figure.
	Rotations in the Coordinate Plane	
		Rotate figures on the coordinate plane given the degree and direction.

Unit	Lesson	Objectives
		Describe the rotation of a figure using coordinates.
	Unit Test	
Congruence and Similarity		
	Congruence and Transformations	
		Describe a sequence of transformations that shows that a given pre-image is congruent to a transformed figure.
	Dilations	
		Use proportional reasoning to determine if one figure is a dilation of another.
		Determine the scale factor of a dilation.
		Determine the result of a dilation given a center of dilation and the scale factor.
	Dilations in the Coordinate Plane	
		Use the scale factor to graph dilations on the coordinate plane.
		Describe the dilation of a figure on the coordinate plane by the scale factor.
	Similarity and Transformations	
		Determine the similarity of figures by comparing corresponding side lengths and angle measures.
		Apply scale factor to find unknown side lengths of an image or pre-image after a dilation or sequence of transformations.
		Describe a sequence of transformations that result in a similar figure.
	Parallel Lines Cut by a Transversal	
		Identify interior angles, exterior angles, alternate interior angles, and alternate exterior angles when a transversal crosses parallel lines.
		Find missing measurements using angle relationships in a diagram of a transversal crossing parallel lines.
		Determine if two lines cut by a transversal are parallel.
	Sum of Interior Angles of a Triangle	

Options FRMS Math 8B-OR		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Explain that the sum of the interior angles of a triangle is 180 degrees by rearranging the angles to create a straight line.
		Use angle relationships formed from parallel lines cut by transversals to establish facts about the interior angles of a triangle.
		Determine the angle measures of interior angles of a triangle.
	Exterior Angles of a Triangle	
		Identify exterior, adjacent interior, and remote interior angles of a triangle.
		Use angle relationships to establish facts about exterior angles of a triangle.
		Determine angle measures of exterior angles of a triangle and the sum of exterior angles of a triangle.
	Similar Triangles and Slope	
		Interpret similar triangles created by intersecting transversal and parallel lines.
		Find unknown measurements of similar triangles.
		Use similar triangles in the coordinate plane to write linear equations.
	Unit Test	
Equations within Volume		
	Introduction to the Volume of a Cylinder	
		Recognize and identify parts of a cylinder.
		Apply the formula to find the volume of a cylinder.
	Applications with the Volume of a Cylinder	
		Find unknown dimensions of a cylinder given its volume.
		Solve real-life problems using the volume of cylinders.
	Introduction to the Volume of a Cone	
		Recognize and identify parts of a cone.

Options FRMS Math 8B-OR		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Connect the volume of a cone to the volume of a cylinder.
		Apply the formula to find the volume of a cone.
	Applications with the Volume of a Cone	
		Find unknown dimensions of a cone given its volume.
		Solve a real-world problem utilizing the formula for volume of a cone.
	Introduction to the Volume of a Sphere	
		Identify the parts of a sphere.
		Connect the volume of a sphere to the volume of a cylinder.
		Apply the formula to find the volume of a sphere.
	Spherical and Cubic Volume Applications	
		Apply volume formulas, including those that evaluate perfect cubes, to find unknown measurements.
		Recognize perfect cubes.
		Solve a real-world problem utilizing the formula for volume of a sphere.
	Unit Test	
Statistics and Probability: Scatterplots and Association		
	Constructing Scatterplots	
		Create a scatterplot using a table of values.
		Analyze a scatterplot.
		Classify dependent and independent variables.
	Interpreting Clusters and Outliers	
		Identify clusters and outliers in a scatterplot and table of values.
		Analyze the influence outliers and clusters have on the data set.

Options FRMS Math 8B-OR		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Explain the meaning of clusters and outliers in context.
	Exploring Association	
		Analyze the correlation and association in scatterplots.
	Drawing Trend Lines	
		Use a graphing calculator to graph scatterplots and draw the trend line.
		Draw a line of best fit in scatterplots and identify its purpose.
	Making Predictions	
		Use a calculator to graph a scatterplot and create line of best fit.
		Substitute x- and y-values into the data to create predictions of a real-world scenario.
		Analyze data to determine interpolations and extrapolations.
	Comparing Data Sets	
		Compare and contrast sets of data.
		Analyze data sets using the trend line.
	Making Two-Way Tables	
		Create a two-way table that organizes bivariate data.
		Determine the variables of a scenario in bivariate data.
		Label components of the two-way table appropriately.
	Interpreting Two-Way Tables	
		Interpret and analyze a two-way table.
		Use frequencies to describe a possible association between two variables.
	Unit Test	
Cumulative Exam		

Options FRMS Math 8B-OR		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Cumulative Exam Review	
	Cumulative Exam	