

	Hours Per Topic	_____
<p>Trigonometric functions of real numbers, the unit circle, trigonometric functions of real numbers, trigonometric graphs, and modeling harmonic motion.</p>	16	<p>Define the unit circle, Locate points on the unit circle, Locate terminal points on the unit circle, Define the reference number, Use reference numbers to find terminal points. Define the trigonometric functions. Evaluate trigonometric functions. Find the domains and signs of the trigonometric functions. Use a calculator to evaluate trigonometric functions. Define even and odd functions. Define the reciprocal and Pythagorean identities. Find all trigonometric functions from the value of one. Write one trigonometric function in terms of another. Graph the sine and cosine functions. Explain the periodic properties of sine and cosine. Graph transformations of the sine and cosine. Define amplitude and period. Graph shifted sine and cosine curves. Graph the tangent, cotangent, secant and cosecant functions and explain their periodic properties. Explain simple harmonic motion (SHM). Give the amplitude, period, and frequency of SHM, model various SHMs, and explain damped SHM.</p>
<p>Trigonometric functions of angles, angle measure, trigonometry of right triangles, trigonometric functions of angles, the Law of Sines, and the Law of Cosines.</p>	16	<p>Define angle measure, degree, radian. Give the relationship between degrees and radians. Convert degrees to radians. Convert radians to degrees. Draw an angle in standard position. Determine coterminal angles. Calculate the length of a circular arc. Calculate the area of a circular sector. Calculate the linear speed and angular speed of a point moving along a circle. Discuss the relationship between linear and angular speed. Find the trigonometric ratios of a right triangle. Determine the trigonometric ratios of special angles. Solve for the angle in a right triangle. Define the trigonometric functions of angles. Evaluate trigonometric functions at any angle. Find the signs of trigonometric functions, Find the reference angle. Use the reference angle to evaluate trigonometric functions. Express the fundamental identities. Determine the area of a</p>

triangle from two sides and the included angle. Use the Law of Sines to solve right triangles including the Angle-

		a vector $v$ . Calculate the work done by a force $F$ along a vector $D$ .
Final examination.	2	Final examination.