

**WAYNE LOCAL SCHOOLS PRECALCULUS PACING GUIDE QUARTER 3**

UNIT	STANDARDS	LESSON DAYS	TEXTBOOK CORRELATION
4	<p>F.TF.3 (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for <math>\pi/3</math>, <math>\pi/4</math> and <math>\pi/6</math>, and use the unit circle to express the values of sine, cosines, and tangent for <math>x</math>, <math>\pi+x</math>, and <math>2\pi-x</math> in terms of their values for <math>x</math>, where <math>x</math> is any real number.</p> <p>F.TF.4 (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.</p> <p>F.TF.6 (+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.</p>	20	Chapter 4 Blitzer
5	<p>F.TF.7 (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.</p> <p>F.TF.8 Prove the Pythagorean identity <math>\sin^2(\theta) + \cos^2(\theta) = 1</math> and use it to find <math>\sin(\theta)</math>, <math>\cos(\theta)</math>, or <math>\tan(\theta)</math> given <math>\sin(\theta)</math>, <math>\cos(\theta)</math>, or <math>\tan(\theta)</math> and the quadrant of the angle.</p> <p>F.TF.9 (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.</p> <p>F-TF.10. Prove the half angle and double angle identities for sine and cosine and use them to solve problems.</p>	25	Chapter 5 Blitzer
<p><b>UNITS: 4 Trigonometric Functions</b>  <b>5 Analytic Trigonometry</b></p>			

## MATHEMATICAL PRACTICES

### Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

## I CAN STATEMENTS:

- I can evaluate and graph inverse trigonometric functions.
- I can find compositions of trigonometric functions
- I can find the values of trigonometric functions for any angle.
- I can construct the unit circle
- I can find values of trigonometric functions using the unit circle.
- I can graph tangent and reciprocal trigonometric functions
- I can graph transformations of the sine and cosine function.
- I can use a graphing calculator to graph the sine functions and its inverse.
- I can use sinusoidal functions to solve problems.
- I can graph and examine the periods and sums and differences of sinusoids.
- I can identify and use trig identities to find trig values.
- I can use trig identities to simplify trig expressions.
- I can verify trig identities.
- I can determine whether equations are trig identities.
- I can solve trig equations using trig identities.
- I can use Pythagorean identities to verify and solve trig equations.