Trig Review Packet

Name:_____

C Level: NO CALC

1. Consider the trigonometric function (in radians) $f(x) = 7\ sin(4x) - 11$.

   a. What is the Amplitude of the function?

   b. What is the period of the function (in radians)? Explain how you know.

   c. What is the midline of the function?

   d. What is the range of the function? ($\# \leq y \leq \#$)

2. Consider the trigonometric function (in degrees) g(x) = -2cos(6x) + 3

   a. What is the Amplitude of the function?

   b. What is the period of the function (in degrees)? Explain how you know.

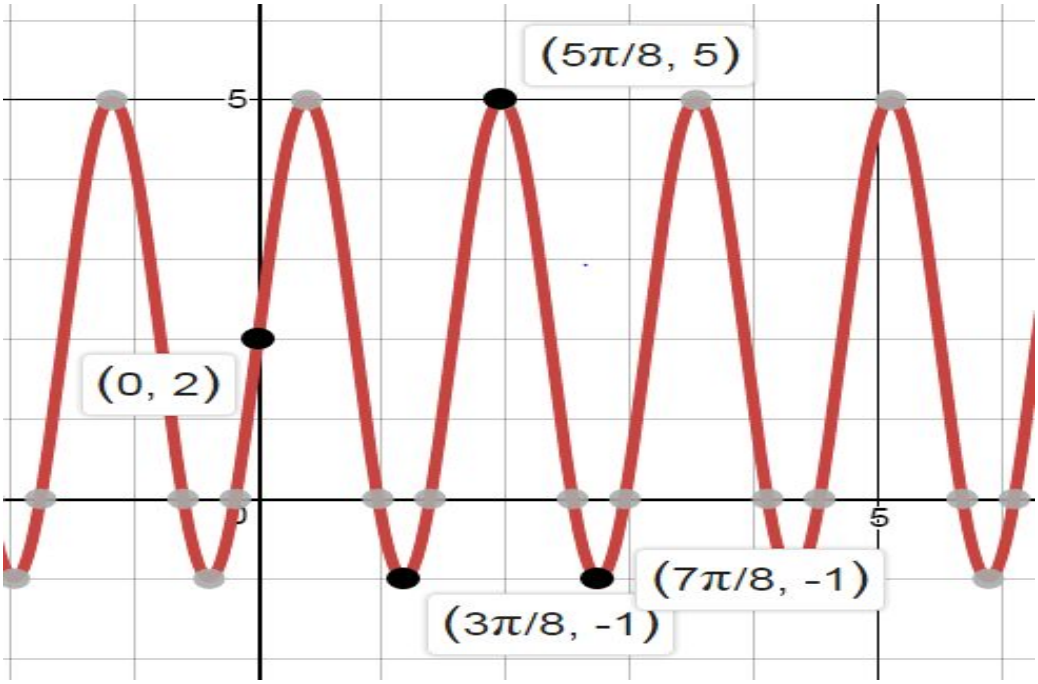
   c. What is the midline of the function?

   d. What is the range of the function? ($\# \leq y \leq \#$)

3. Use the Unit Circle to complete the table:

Number of radians of rotation, θ	Quadrant/Axis	Measure of Reference Angle, in radians	$cos\ (\theta)$	$sin\ (\theta)$	$tan\ (\theta)$
$\frac{\pi}{6}$					
$\frac{3\pi}{2}$					
$\frac{21\pi}{6}$					
$-\frac{2\pi}{3}$					

4. Find an equation (in radians) of the function shown: $y = \#sin(\#x) + \#$



A/B Level Questions: NO CALC

5. Suppose θ represents a number of radians of rotation. Use the unit circle to find the first 3 positive and first 3 negative solutions to the equation $sin(\theta) = \frac{1}{2}$. Explain how you found your answers.

6. Suppose θ represents a number of degrees of rotation. Use the unit circle to find the first 3 positive and first 3 negative solutions to the equation $tan(\theta) = 1$. Explain how you found your answers

7. Use the Amplitude, Frequency, Horizontal shift and midline to write an equation for each function described below:

   a. A Ferris wheel completes a rotation in 720 seconds and has a radius of 25 meters. The lowest point on the Ferris wheel is 5 meters above the ground -- in degrees.

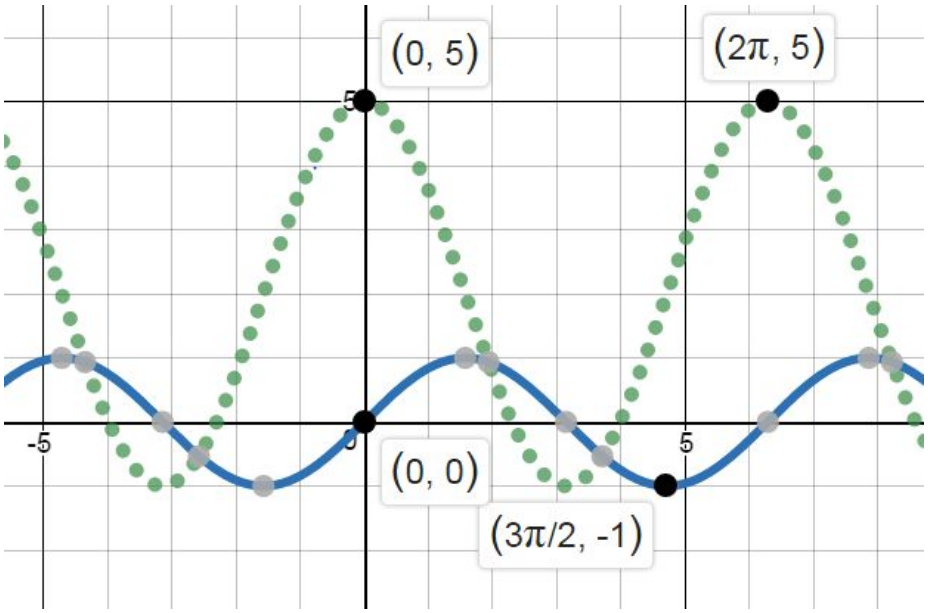
   b. A trig function has its first positive maximum at (7, 12); first positive minimum at (21,0) -- use radians.

   c. A trig function has a vertical asymptote at every multiple of $\frac{\pi}{2}$. It also has the property that f($\frac{\pi}{2}$) = 0. Use radians.

8. The solid graph is sinx.

a. Find a, b, h, k, so that f(x) = asin(b(x-h))+k is the dotted graph

b. Find a, b, h, k, so that g(x) = acos(b(x-h))+k is the dotted graph



9. The solid graph is cosx.

a. Find a, b, h, k, so that f(x) = asin(b(x-h))+k is the dotted graph

b. Find a, b, h, k, so that g(x) = acos(b(x-h))+k is the dotted graph