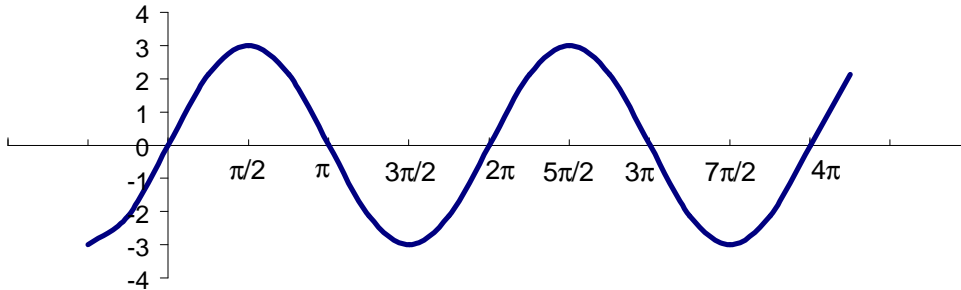


Trigonometry
Worksheet for Test #5

1.) Given the following graph, answer questions a-g.



a) Indicate a cycle on this graph by using tick marks (or any other method) to indicate the beginning and end of the cycle.

b) What is the period of this function?

c) What is the frequency of this function?

d) What is the amplitude of this function?

e) Which of the following equations must be associated with the above graph?

$$y = \cos\left(3x - \frac{p}{2}\right)$$

$$y = \cos\left(x + \frac{p}{2}\right) + 3$$

$$y = 3 \cos x$$

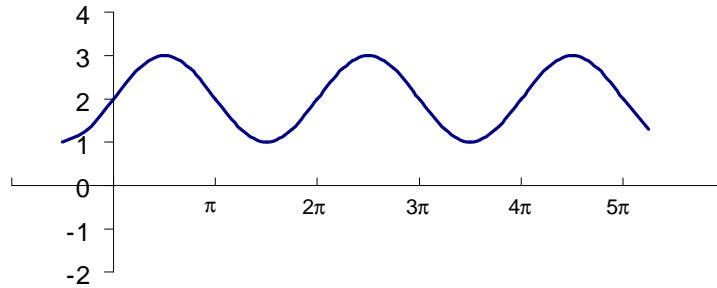
$$y = 3 \cos\left(x - \frac{p}{2}\right)$$

$$y = 3 \cos\left(x + \frac{p}{2}\right)$$

f) Is this an even or an odd function?

g) What is the range of this function?

2.) Given the following graph, answer questions a-g.



a) Indicate a cycle on this graph by using tick marks (or any other method) to indicate the beginning and end of the cycle.

b) What is the period of this function?

c) What is the frequency of this function?

d) What is the amplitude of this function?

e) Which of the following equations must be associated with the above graph?

$$y = \sin(3x)$$

$$y = \sin x + 3$$

$$y = \sin x + 2$$

$$y = \sin x - 2$$

$$y = \sin(2x)$$

f) Is this an even or an odd function?

g) What is the range of this function?

3.) Match the function in the left column with the correct graph in right column

_____ $y = \sin x$

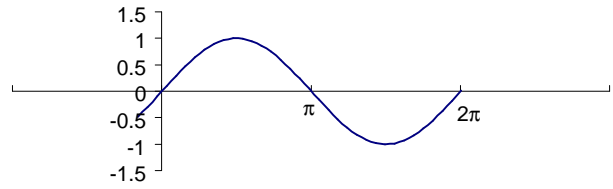
_____ $y = \sin 2x$

_____ $y = -\sin x$

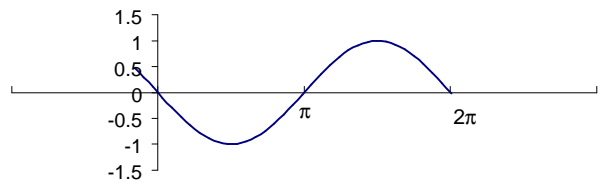
_____ $y = \sin x - \pi/4$

_____ $y = 1/2 \sin x$

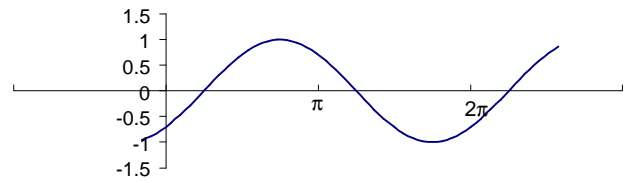
Graph A



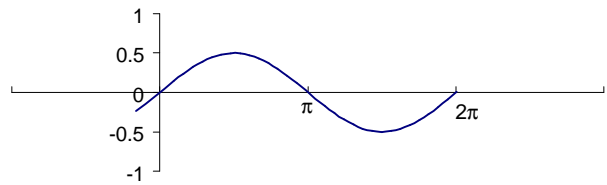
Graph B



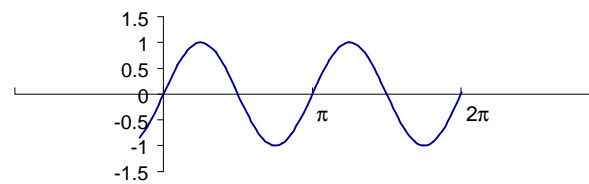
Graph C



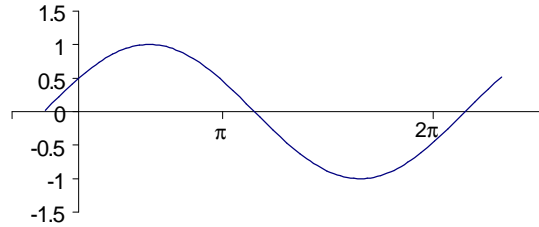
Graph D



Graph E



4.) Given the graph below, select the function that it represents.



- a) $y = \cos(x + \pi/3)$
 - b) $y = \cos(x - \pi/3)$
 - c) $y = \cos x + \pi/3$
 - d) $y = \cos x - \pi/3$
- 5.) Given the function $y = 3\sin(2x - \pi/4) + 2$ answer the following questions:

What is the amplitude?

What is the period?

What is the frequency?

Is there a horizontal shift? _____ If so, the shift is _____ units to the *left/right*.

Is there a vertical shift? _____ If so, the shift is _____ units *up/down*.

6.) Given the function $y = 0.5\cos(x - \pi/8) + 2$ answer the following questions:

What is the amplitude?

What is the period?

What is the frequency?

Is there a horizontal shift? _____ If so, the shift is _____ units to the *left/right*.

Is there a vertical shift? _____ If so, the shift is _____ units *up/down*.

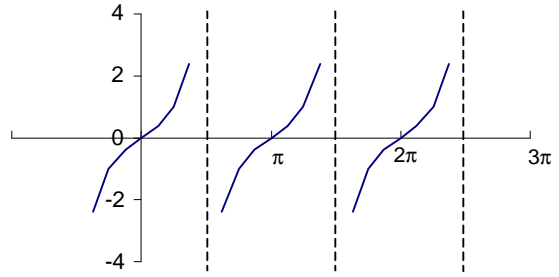
7.) Match the graph with correct function.

_____ $y = \tan x + 1$

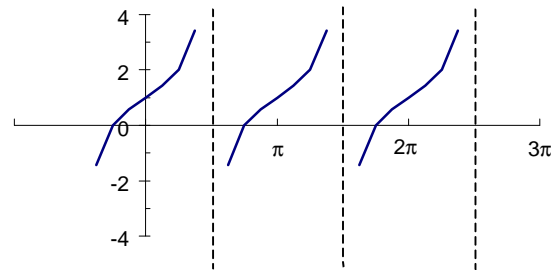
_____ $y = \tan x$

_____ $y = \tan(1/2x)$

Graph A



Graph B



Graph C

