Pre Calculus
Practice Worksheet #1 (4.1-4.5)

Name:_____Date:_____Per:_____

Find the value of the following expressions. Simplify answers.

1) $-\tan\left(\dfrac{3\pi}{4}\right)+\cos\dfrac{5\pi}{3}$

2) $\sec\dfrac{5\pi}{2}+\cos\left(-\dfrac{9\pi}{2}\right)$

3) $\sin 7\pi + \cos 9\pi$

4) $\cos\dfrac{7\pi}{6}-\tan\dfrac{5\pi}{6}$

5) $\tan\dfrac{5\pi}{4}-\csc\left(\dfrac{7\pi}{6}\right)$

6) $\sin\left(-\dfrac{7\pi}{3}\right)+\tan\dfrac{5\pi}{6}$
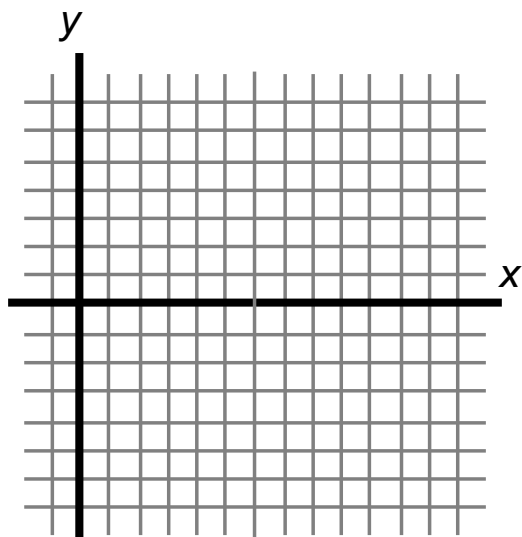
7) $\cos\dfrac{7\pi}{3}-\cot\dfrac{5\pi}{2}$

8) $\cot\left(-\dfrac{2\pi}{3}\right)+\cos(-3\pi)$

9) $\cos\dfrac{5\pi}{4}-\cot\dfrac{3\pi}{2}$

10) $\cos^2 5\pi + \sin^2 10\pi$

1)	
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	
	GRAPH
12)	
13)	
14) a)	
b)	c)
d)	e)
15) a)	
b)	c)
d)	e)

11) Graph one period of $f(x) = -3\sin\left(3\theta - \dfrac{\pi}{2}\right) - 3$. Label the x and y axis correctly.

It is strongly suggested you draw problems 12 – 13.

12) A pendulum is 15.8 cm. long, and the bob at the end of the pendulum travels 23.5 cm. To the nearest degree, find the measure of the angle through which the pendulum swings.

13) A wheel has a radius of 8 ft. As it turns a cable connected to a box winds onto the wheel. Find the number of degrees the wheel must be rotated to move the box 45 ft. (Round answer to the nearest degree).

Graph the following equations by first determining:
a) the amplitude
b) the period
c) horizontal shift
d) vertical shirt
e) reflection about the x-axis.
On the graph, label the axes clearly.

14) $y = -\sin(2x - \pi) + 4$

15) $y = 2\cos(x + \dfrac{\pi}{2}) - 3$