Pre Calculus
Practice Worksheet #2 (4.1-4.5)

Name:_____Date:_____Per:_____

Find the value of the following expressions. Simplify answers.

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

2) $\cos 7\pi+\sec 2\pi$

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

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

5) $\sin\dfrac{\pi}{2}-\csc\left(-\dfrac{7\pi}{2}\right)$

6) $\sin\left(\dfrac{5\pi}{6}\right)-\sin\dfrac{7\pi}{6}$

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

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

9) $\sin^2\dfrac{\pi}{2}-\cos^2\dfrac{\pi}{2}$

10) $\sec\dfrac{5\pi}{4}-\cot\dfrac{\pi}{2}$

11) $\sin\left(-\dfrac{3\pi}{4}\right)+\tan\left(\dfrac{5\pi}{6}\right)$

12) $\sec\left(-\dfrac{7\pi}{2}\right)+\sin 0$

13) $\cos\dfrac{7\pi}{3}-\cos\left(\dfrac{\pi}{6}\right)$
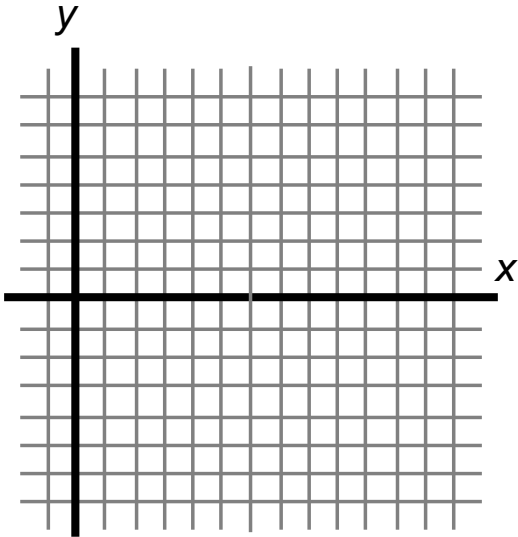
14) $\csc\left(-\dfrac{3\pi}{2}\right)+\sec 3\pi$

15) $\cot\dfrac{3\pi}{2}+\sin\left(\dfrac{13\pi}{6}\right)$

16) $\tan\dfrac{7\pi}{4}+\tan\dfrac{4\pi}{3}$

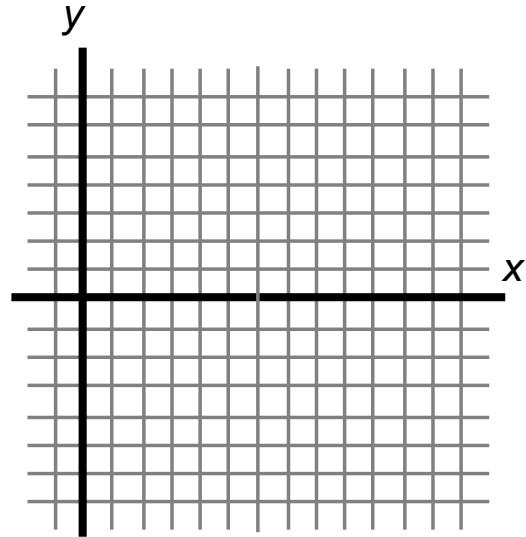|	
1)	
2)	
3)	
4)	
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11)	
12)	
13)	
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16)	
17)	**GRAPHS**
18)	
19)	
20)	

17) Graph one period of $f(x) = -3\cos\left(3\theta - \dfrac{\pi}{2}\right) + 1$.

Label the x and y axis correctly.

y

x

18) Graph one period of $f(x) = 5\sin(8\theta - \pi) - 2$.

Label the x and y axis correctly.

y

x

It is strongly suggested you draw problems 20 – 21.

19) A pendulum is 41cm. long, and the bob at the end of the pendulum travels 14.5 cm.
      To the nearest degree, find the measure of the angle through which the pendulum swings.

20) A wheel has a radius of 10 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 51 ft. (Round answer to
      the nearest degree).