Name_____

Honors Algebra 2/Trig Unit 7 Review

1. Find two positive and two negative coterminal angles to the following angle: $\dfrac{7\pi}{6}$

$$\dfrac{19\pi}{6}, \dfrac{31\pi}{6}$$
$$-\dfrac{5\pi}{6}, -\dfrac{17\pi}{6}$$

2. Find two positive and two negative coterminal angles to the following angle: $-135°$

$$225^0, 585^0$$
$$-495^0, -855^0$$

**Convert the following angles from degrees to radians.**

3. $200°$

$$\dfrac{10\pi}{9}$$

4. $-105°$

$$-\dfrac{7\pi}{12}$$

**Convert the following angles from radians to degees.**

5. $-\dfrac{5\pi}{12}$

$$75^0$$

6. $\dfrac{25\pi}{36}$

$$125^0$$

7. An angle $\theta$ has a terminal side that lies in quadrant 4 and has a tangent of $-\dfrac{3\sqrt{7}}{7}$,

Find the sine and cosine of $\theta$. Express your answer in simplified radical form.

$$\sin\theta = -\dfrac{3}{4}$$

$$\cos\theta = \dfrac{\sqrt{7}}{4}$$

8. An angle $\theta$ has a terminal side that lies in quadrant 2 and has a sine of $\dfrac{2\sqrt{7}}{7}$,

Find the other 5 trigonometric ratios of $\theta$. Express your answer in simplified radical form.

| | |
|---|---|
| $\sin\theta = \dfrac{2\sqrt{7}}{7}$ | $\csc\theta = \dfrac{\sqrt{7}}{2}$ |
| $\cos\theta = -\dfrac{\sqrt{21}}{7}$ | $\sec\theta = -\dfrac{\sqrt{21}}{3}$ |
| $\tan\theta = -\dfrac{2\sqrt{3}}{3}$ | $\cot\theta = -\dfrac{\sqrt{3}}{2}$ |

**For problems 9-12, state the quadrant that the angle $\theta$ lies in.**

9. $\csc\theta < 0$ and $\cot\theta > 0$ _____III_____

10. $\theta = -14.78$ _____IV_____

11. $\theta = 571°$ _____III_____

12. $\tan\theta > 0$ and $\sec\theta < 0$ _____III_____

**Graph the following trigonometric functions. Graph 1 period for sin, cos, sec, and csc, and 2 periods for tan and cot. You will need to draw the _x_ and _y_ axis and include exact values for each quarter period and endpoints.**
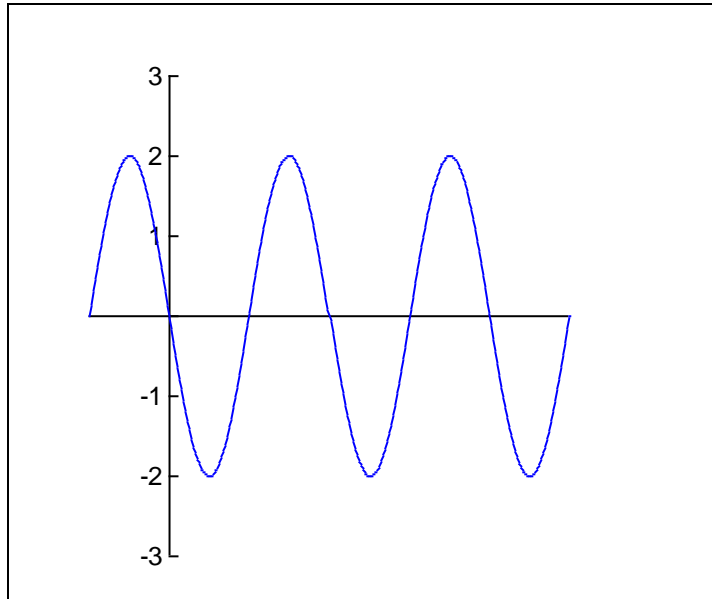
13. $y = 2\sin(5x - \pi)$

a=__2____  Amp.__2____

b=__5____  Per. $\dfrac{2\pi}{5}$

QP $\dfrac{\pi}{10}$

c=__$\dfrac{\pi}{5}$__  PS $\dfrac{\pi}{5}$ →

d=__0____VS__none___



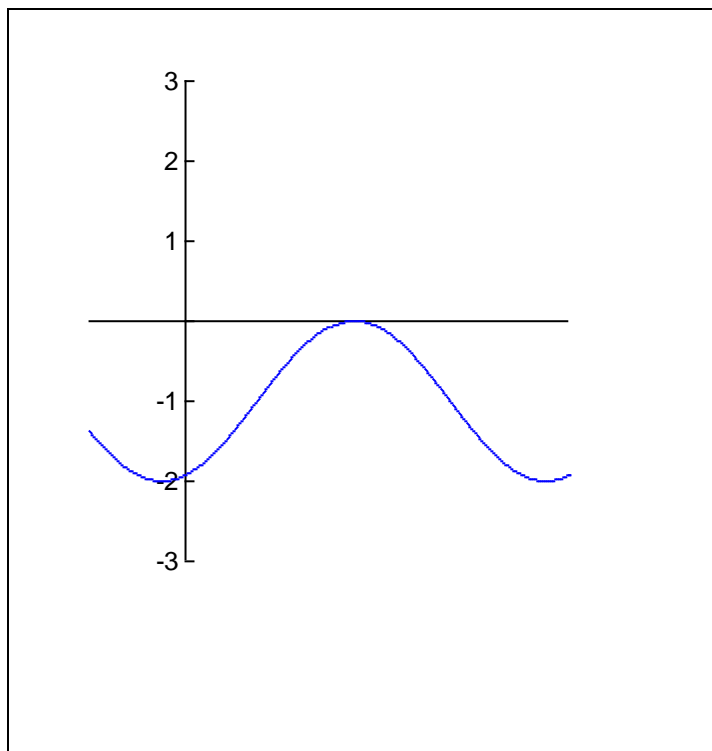14. $y = -\cos\left(x + \dfrac{\pi}{8}\right) - 1$

a=__-1__ Amp.__1____

b=__1____ Per. __$2\pi$__

QP $\dfrac{\pi}{2}$

c=__$-\dfrac{\pi}{8}$__ PS $\dfrac{\pi}{8}$ ←

d=__-1____VS_____

15. $y = \sec \dfrac{1}{2}\left(x + \dfrac{\pi}{4}\right)$

a=__1____  Amp.___1___

b=____$\dfrac{1}{2}$____  Per. ___$4\pi$_____

QP__$\pi$____

c=____$-\dfrac{\pi}{4}$____  PS ___$\dfrac{\pi}{4}$ ←___

d=__0____VS__none___
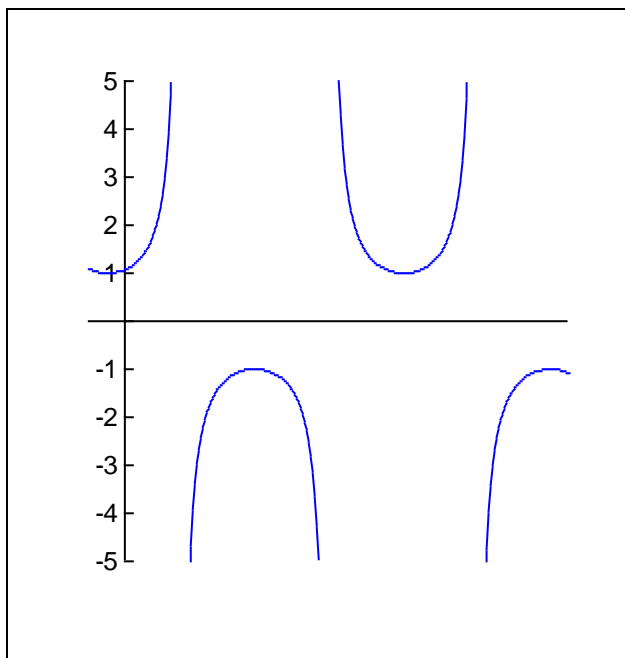
16. $y = -2\tan(2x) - 1$

a=___-2__  Amp.__2___

b=___2____  Per. ___$\pi$____

QP__$\dfrac{\pi}{4}$____

c=___0____  PS _none____

d=__-1___VS___1↓___