

Name: _____

Date: _____

Ch 5 REVIEW: Coordinate Trig

For the following problems, draw the angle, name the reference angle, name a positive and negative coterminal angle, and evaluate the exact sine, cosine, and tangent values.

1. $\frac{18\pi}{4}$

2. 300°

3. $\frac{13\pi}{6}$

4. 1620°

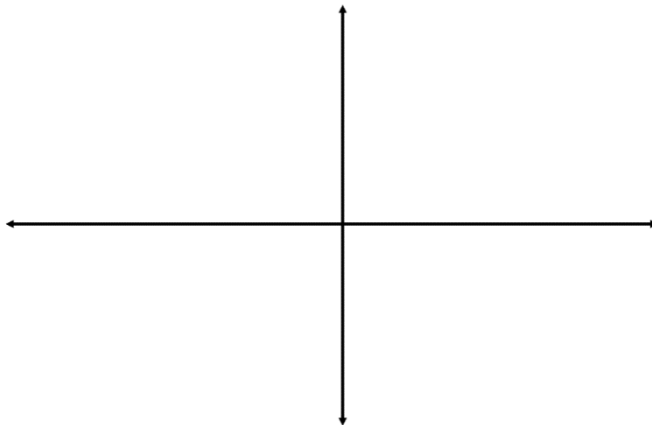
5. Determine the exact value for cosine in Quadrant IV when $\tan = \frac{-12}{9}$.

6. Determine the exact value for secant in Quadrant II when $\cot = \frac{-\sqrt{11}}{5}$.

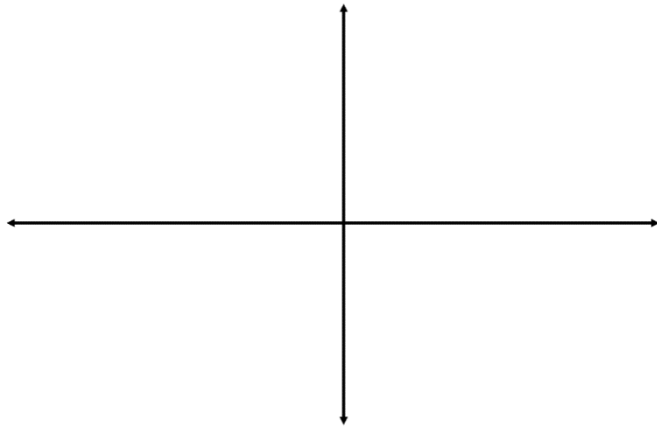
7. Determine the exact value for csc in Quadrant III when $\cos = \frac{-24}{30}$.

For the following problems, list the amplitude, period, b value, and increments. Then create a t-table. Then graph the function and list the domain and range.

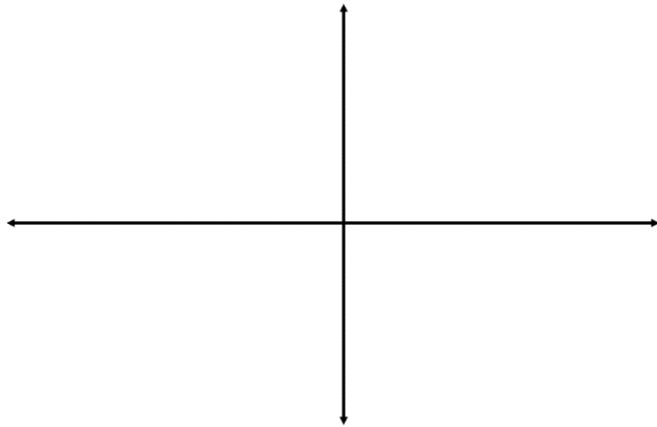
8. $y = 5\cos\frac{\pi x}{10} - 3$



9. $y = 3\sin 4\left(x - \frac{\pi}{2}\right) + 2$



10. $y = 2 \tan\left(x - \frac{\pi}{4}\right)$



Evaluate the expressions.

11. $\sec(-315^\circ)$

12. $\arcsin\left(-\frac{\sqrt{2}}{2}\right)$

13. $\sin^{-1}(0)$

14. $\tan^{-1}(1)$

15. $\tan(\arcsin\left(-\frac{\sqrt{2}}{2}\right))$

16. $\sin^{-1}(\cos(\frac{5\pi}{3}))$

17. A 7.25 inch circular power saw rotates at 5200 revolutions per minute.

a) Find the angular speed of the saw blade in radians per minute.

b) Find the linear speed (in feet per minute) of one of the 24 cutting teeth as they contact the wood being cut.

18. The diameter of a DVD is approximately 12 centimeters. The drive motor of the DVD player is controlled to rotate precisely between 200 and 500 revolutions per minute, depending on what track is being read.

a) Find an interval for the angular speed of a DVD as it rotates.

b) Find an interval for the linear speed on a point of the outermost track as the DVD rotates. Don't forget units!

