Pre Calculus Chapter 4 sections 1-5 Review Name_____

Convert the angle to decimal degrees and round to the nearest hundredth of a degree.

1) 54°42'16"

Convert the angle to degrees, minutes, and seconds.

2) 197.41°

Convert from degrees to radians. Use the value of π found on a calculator and round answers to four decimal places, as needed.

3) 570°

Use the arc length formula and the given information to find the indicated quantity.

4) r = 11 in., θ = 16 rad; find s

Assume that θ is an acute angle in a right triangle satisfying the given conditions. Evaluate the indicated trigonometric function.

5) $\sin\theta = \frac{6}{7}$; $\cos\theta$

6) $\tan\theta = \frac{1}{5}$; $\csc\theta$

Use the arc length formula and the given information to find the indicated quantity.

7) r = 14 ft, θ = 39°; find s

Give the exact value.

8) $\tan\frac{\pi}{3}$

9) sec 45°

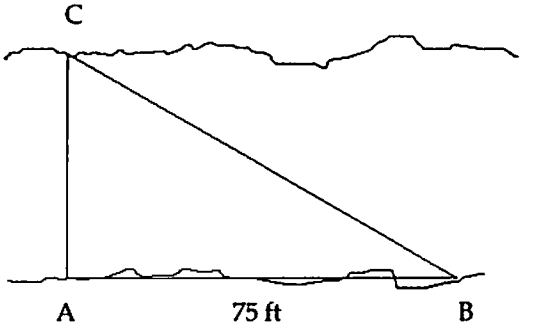
Solve the equation.

10) Solve $\sin\theta = \frac{1}{2}$ for θ, where $0° \le \theta \le 90°$.

Solve the problem.

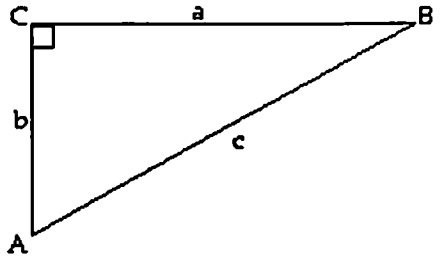
11) From a distance of 1206 feet from a spotlight, the angle of elevation to a cloud base is 43°. Find the height of the cloud base to the nearest foot.

12) To measure the width of a river, a surveyor starts at point A on one bank and walks 75 feet down the river to point B. He then measures the angle ABC to be 20°32'11". Estimate the width of the river to the nearest foot. See the figure below.



Solve the right triangle for all missing sides and angles to the nearest tenth.

13)



$c = 17$
$A = 55°$

Solve the equation.

14) Solve $\sin\theta = \frac{\sqrt{2}}{2}$ for θ, where $0° \le \theta \le 90°$.

15) Solve $\tan\theta = \frac{\sqrt{3}}{3}$ for θ, where $0 \le \theta \le \frac{\pi}{2}$.

Suppose that θ is in standard position and the given point is on the terminal side of θ. Give the exact value of the indicated trig function for θ.

16) (9, 12); find $\sin\theta$.

Determine the sign (positive or negative) of the given value without use of a calculator.

17) $\cos 250°$

Give the exact value.

18) $\cos 150°$

Evaluate without using a calculator.

19) $\sin\theta$, if $\cos\theta = \frac{2}{5}$ and $\tan\theta < 0$

20) $\tan\alpha$, if $\sec\alpha = \frac{7}{4}$ and $\csc\theta < 0$

Give the exact value.

21) $\sec 210°$

Determine the sign (positive or negative) of the given value without use of a calculator.

22) $\tan 151°$

Suppose that θ is in standard position and the given point is on the terminal side of θ. Give the exact value of the indicated trig function for θ.

23) (−8, 2); find $\tan\theta$.

Find the amplitude and Period of the function.

24) $y = 5\sin\frac{1}{4}x$

Describe the transformations required to obtain the graph of the function f(x),

25) $f(x) = -3\cos 8x$

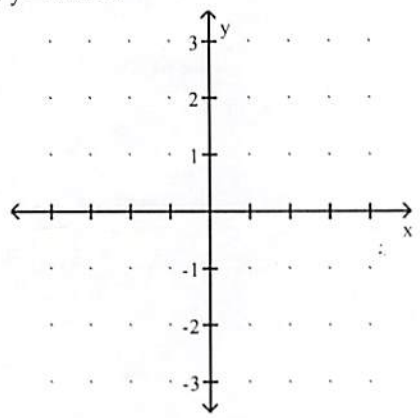
1.

2.

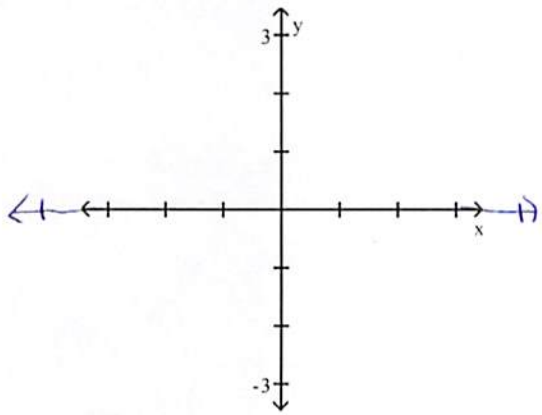
3.

Graph the function.

26) $y = 3 \sin x$

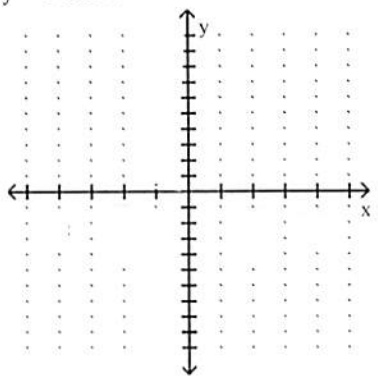


27) $y = \cos \frac{1}{4}x$

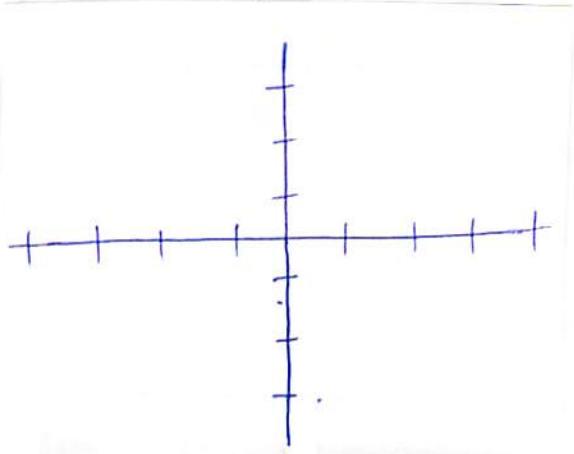


Graph the function.

29) $y = 5 \tan x$



30) $y = \sec\left(\frac{x}{4}\right)$



Identify the maximum , minimum and Zero values of the function. In the interval $[-2\pi, 2\pi]$

28) $y = \frac{1}{8} \sin 8x$