

Pre Calculus - Chapter 4 Review

Name _____ Date _____ Per _____

Find the exact value of:

1) $\tan \frac{11\pi}{6}$ 2) $\sec(-\frac{5\pi}{3})$ 3) $\csc \frac{5\pi}{4}$ 4) $\cos 0$ 5) $\sin(-\frac{3\pi}{2})$ 6) $\cot(-\frac{2\pi}{3})$

Find the length of an arc of a circle with the given radius and central angle:

7) $r = 7$ in
 $\theta = 60^\circ$

8) $r = 25$ cm
 $\theta = 200^\circ$

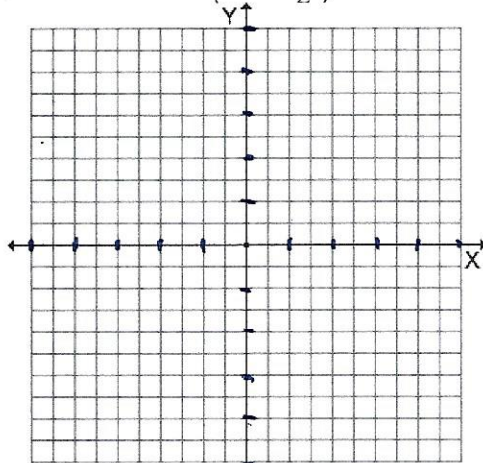
Point P moves counterclockwise on a circle with radius r , and center at the origin. If P starts at $(r,0)$ **find the coordinates** of its final position.

9) $s = 5\pi$
 $r = \frac{15}{4}$

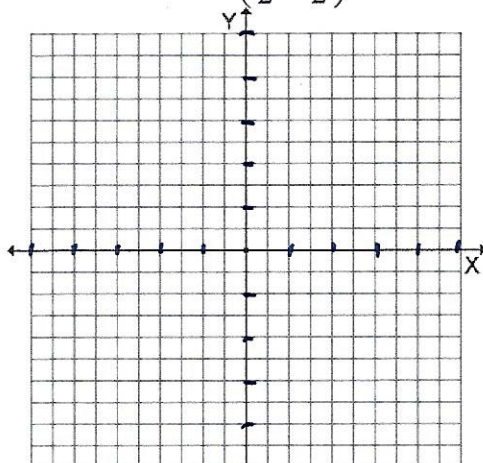
10) $s = \frac{9\pi}{4}$
 $r = \frac{3}{4}$

Graph the following functions: In problems 11 and 13 also find:
a) amplitude, b) value of b , c) period, d) phase shift, and e) vertical shift.

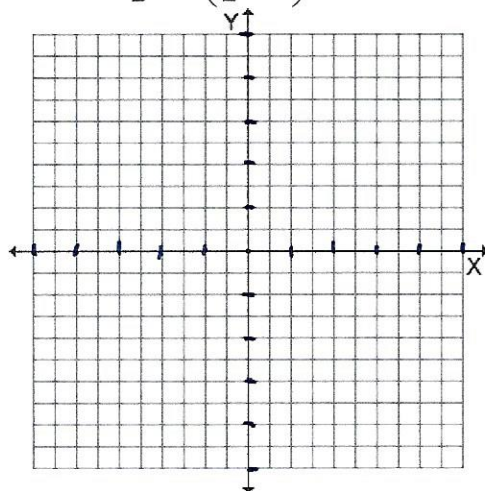
11) $y = 3 \cos \left(2\theta + \frac{\pi}{2} \right) - 2$



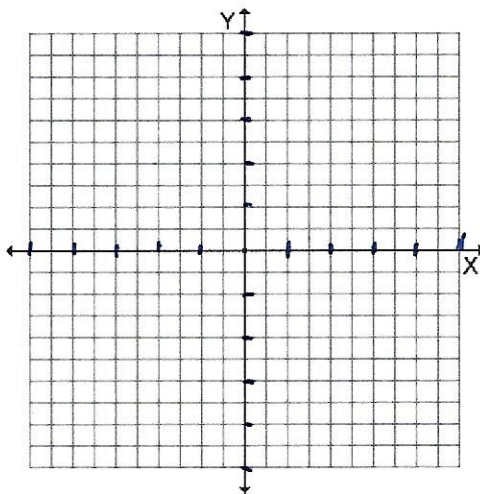
12) $y = 2 \sec \left(\frac{\theta}{2} + \frac{\pi}{2} \right) - 2$



13) $y = \frac{1}{2} \sin \left(\frac{\theta}{2} - \pi \right) + 3$



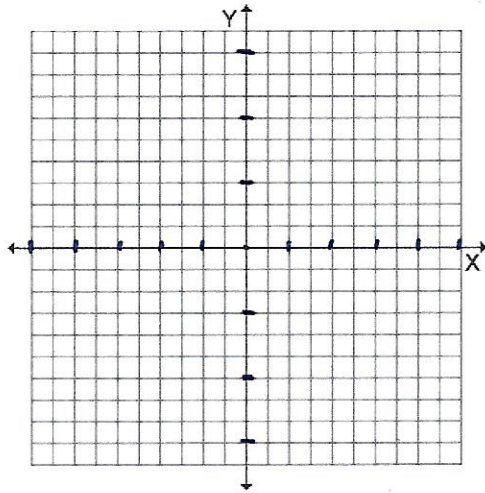
14) $y = 2 \csc (2\theta - \pi) - 1$



Assg#

1)
2)
3)
4)
5)
6)
7)
8)
9)
10)
11)a)
b)
c)
d)
e)
13)a)
b)
c)
d)
e)
16)
17)
18)
19)
20)
21)
22)
23)
24)

15) $y = \tan(\theta + \frac{\pi}{2})$



Write an equation for a function with the given information:

16) sine, amplitude = 2, period $\frac{\pi}{4}$, phase shift = π , vertical shift = -3.

17) cosine amplitude = 4, period = 2π , phase shift = $-\frac{\pi}{2}$, vertical shift = $\frac{1}{2}$.

Evaluate:

18) $\sin^{-1} \frac{\sqrt{3}}{2}$

19) $\sin(\cos^{-1}(\frac{1}{2}))$

20) $\sin^{-1}(\cos^{-1} 0 - \sin^{-1} 1)$

Find all the values of θ for which the following equations are true:

$0 \leq \theta \leq 2\pi$
21) $\tan \theta = 0$

$0 \leq \theta \leq 3\pi$
22) $\sin \theta = 1$

Measurement conversion:

23) Change $-\frac{5\pi}{12}$ to degree measurement.

24) Change 118° to radian measurement.

Notes: Make sure you know the following:

- 1) All the word problems in chapter 4 including bearings in 4.8 and all the worksheets (pendulum, windshield wipers, angle of elevation and depression, etc.)
- 2) 4.7 Pg. 563 (63-70)
- 3) Domain and range of all trig functions.