

**Trig. 1thru 4 Review**  
**Algebra II B**

Name: \_\_\_\_\_

Hour: \_\_\_\_\_

Formula's: **(Arc)**  $s = r \cdot \theta$  (in radians),  $R = \frac{\pi}{180} \cdot D$ ,  $D = \frac{180}{\pi} \cdot R$

**Convert Degrees to Radians.**

1.  $15^\circ$

2.  $135^\circ$

3.  $270^\circ$

4.  $210^\circ$

**Convert Radians to Degrees.**

5.  $\frac{7\pi}{6}$

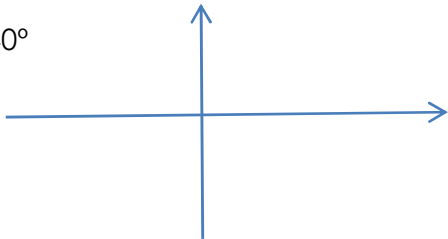
6.  $\frac{5\pi}{3}$

7.  $\frac{7\pi}{4}$

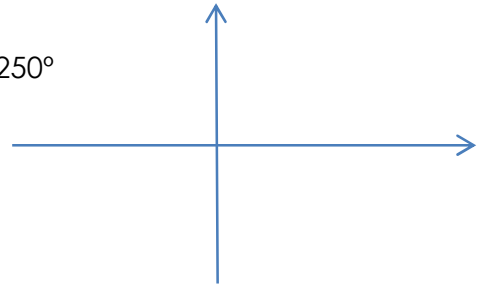
8.  $\frac{11\pi}{6}$

**Draw the angle in standard position, then find one positive angle and one negative angle that is Co-terminal with the given angle.**

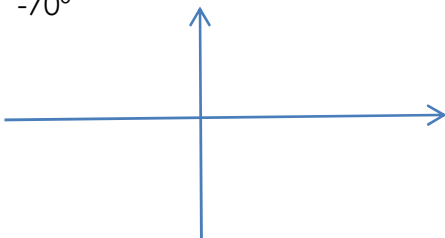
9.  $140^\circ$



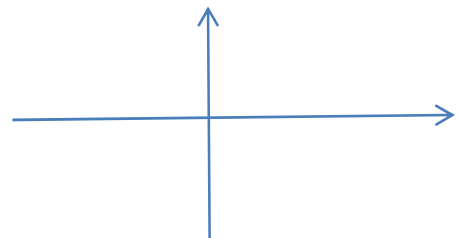
10.  $250^\circ$



11.  $-70^\circ$



12.  $350^\circ$

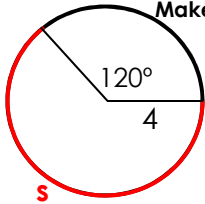


13. Find a positive angle that is coterminal with  $270^\circ$ .

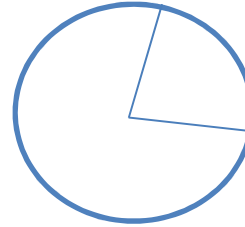
14. Find a negative angle that is coterminal with  $\frac{\pi}{3}$ .

15. Find the length of arc **s** in the figure.

Make sure you convert the angle to radians!



16. An arc of length 50ft subtends a central angle  $\theta$  in a circle of radius 30ft. **Find  $\theta$**  in radians.



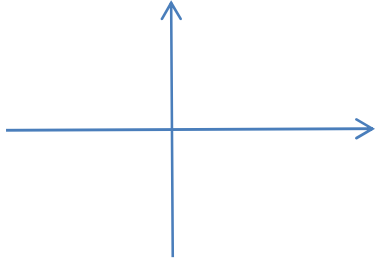
**College Preparation question:**

17. A cars wheels are 20 inches in diameter. How far in miles will the car travel if its wheels revolves 10000 times? (Hint: convert inches to miles...5,280 ft =1 mile)

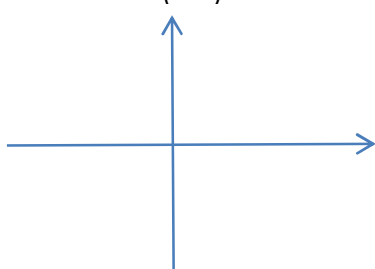
18. Because earth is a sphere, the distance from one point to another is an arc length. If the latitude of Rio de Janeiro, Brazil is 23 degrees South of the equator, and the radius of the earth is 3,963 miles, then how far is Rio from the Detroit, if the latitude of Detroit is 42 degrees North of the equator? Draw a picture to help you with this problem.

**Find the EXACT VALUE of the trig function. SHOW YOUR WORK!!! Make sure you draw the, and label it!**

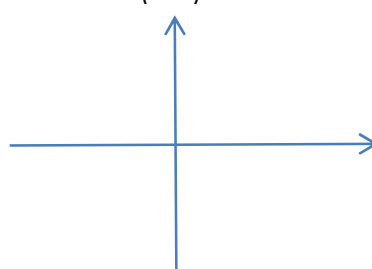
**19.**  $\sin 60^\circ$



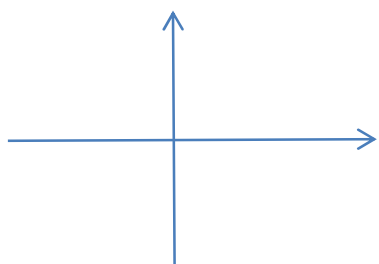
**20.**  $\cos (30^\circ)$



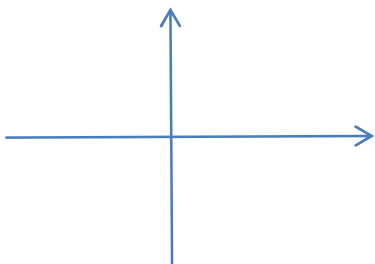
**21.**  $\tan (45^\circ)$



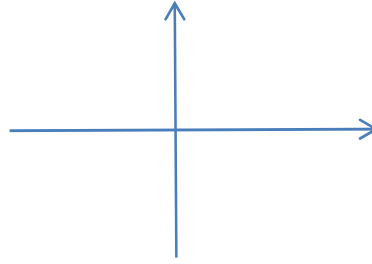
**22.**  $\tan 225^\circ$



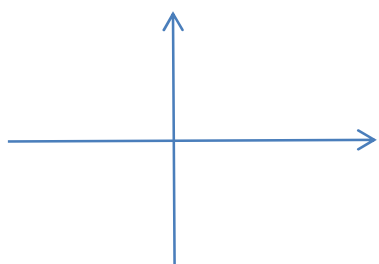
**23.**  $\sin(300^\circ)$



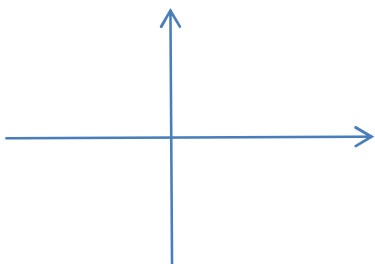
**24.**  $\cos (120^\circ)$



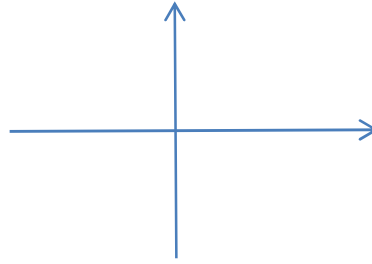
**25.**  $\tan 315^\circ$



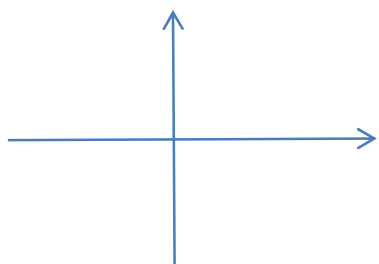
**26.**  $\sin(150^\circ)$



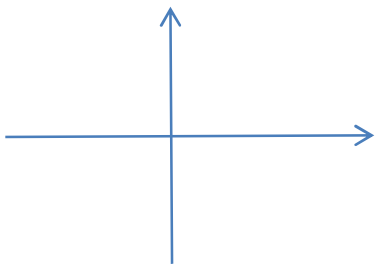
**27.**  $\cos (30^\circ)$



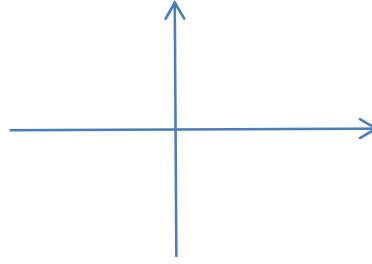
**28.**  $\tan -225^\circ$



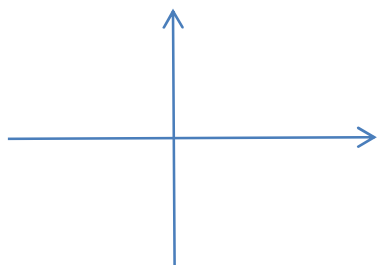
**29.**  $\sin(-240^\circ)$



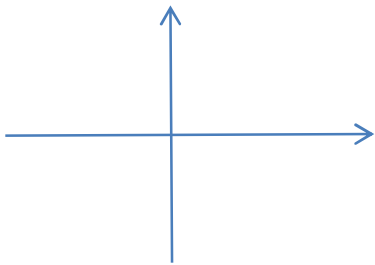
**30.**  $\cos (-30^\circ)$



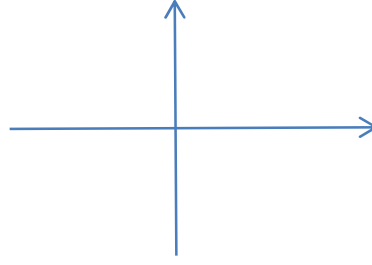
**31.**  $\tan -45^\circ$



**32.**  $\sin(-30^\circ)$

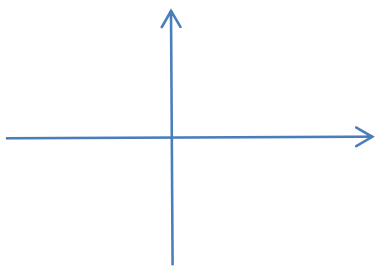


**33.**  $\cos (-120^\circ)$

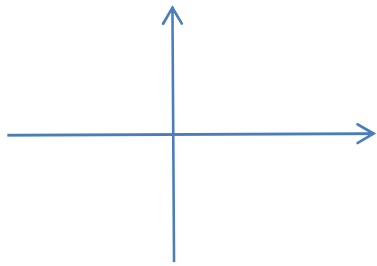


**Use the Unit circle to evaluate the following Trig. Functions.**

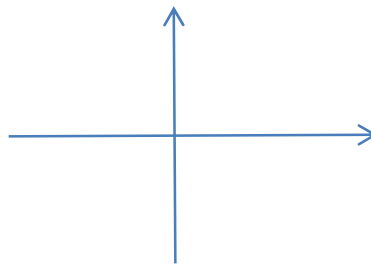
**34.**  $\tan 0^\circ$



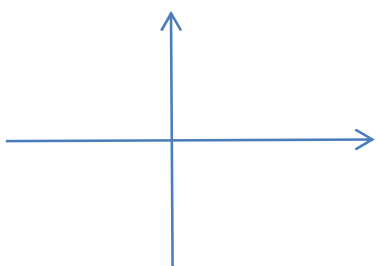
**35.**  $\sin(90^\circ)$



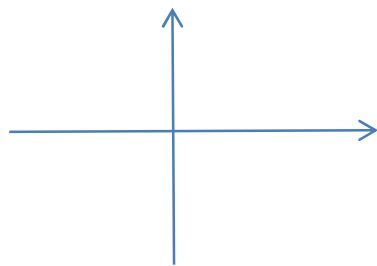
**36.**  $\cos(180^\circ)$



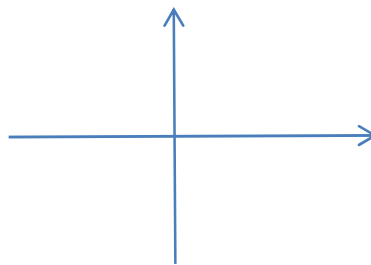
**37.**  $\tan 360^\circ$



**38.**  $\sin(-90^\circ)$

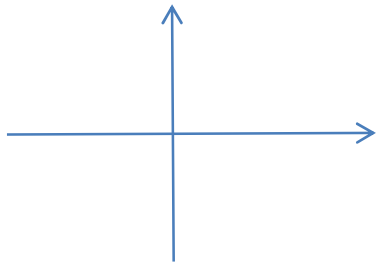


**39.**  $\cos(-270^\circ)$

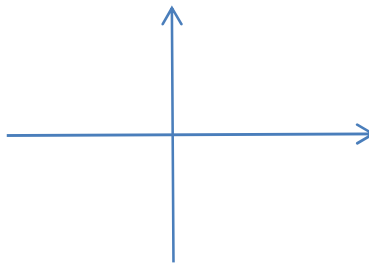


**Find the quadrant in which  $\theta$  lies given the following information. Make sure you draw the triangle!**

**40.**  $\cos \theta > 0$  and  $\sin \theta < 0$

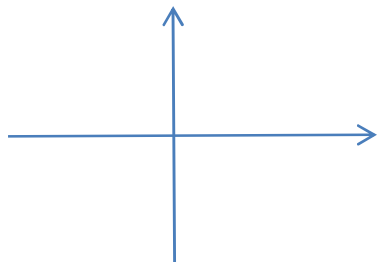


**41.**  $\cos \theta > 0$  and  $\sin > 0$



**Find the values of the remaining trig functions of  $\theta$  given the following information. Make sure you draw the triangle!**

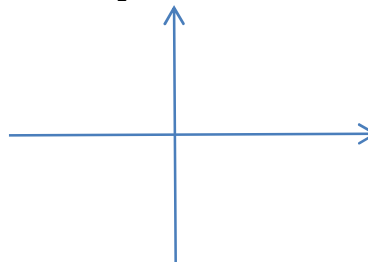
**42.**  $\sin \theta = -1/2$ ,  $\theta$  is in Quadrant III



**$\cos \theta =$**

**$\tan \theta =$**

**43.**  $\tan \theta = -\frac{\sqrt{3}}{1}$ , is in Quadrant II



**$\sin \theta =$**

**$\cos \theta =$**