

## Chapter 5 - Trigonometric Functions

### CALCULATOR ACTIVE.

1. Convert the degree measure to radians. Leave your answer as a fraction in terms of  $\pi$ :  $480^\circ$
2. Convert the radian measure to degrees:  $\frac{-11\pi}{3}$
3. Convert  $41.46^\circ$  to degrees, minutes, and seconds.
4. Sketch the angle with  $\theta = \frac{13\pi}{6}$
5. Find two angles, one positive and one negative, which are co-terminal with the given angle:  $\theta = -10^\circ$
6. Find the arc length and area of a sector with the following:  $\theta = 120^\circ$ ,  $r = 4$  inches

7. Given that the terminal side of an angle  $\theta$  in standard position passes through  $(2, -1)$ , find the exact values of the six trig. functions.

$$\sin \theta = \underline{\hspace{2cm}} \quad \csc \theta = \underline{\hspace{2cm}}$$

$$\cos \theta = \underline{\hspace{2cm}} \quad \sec \theta = \underline{\hspace{2cm}}$$

$$\tan \theta = \underline{\hspace{2cm}} \quad \cot \theta = \underline{\hspace{2cm}}$$

**NO CALCULATOR**

8. Find the trigonometric values for the angles shown below:

<u>Angle</u>	<u>sin</u> $\theta$	<u>cos</u> $\theta$	<u>tan</u> $\theta$	<u>csc</u> $\theta$	<u>sec</u> $\theta$	<u>cot</u> $\theta$
$0^\circ$						
$270^\circ$						
$\pi/4$ rad						
$\pi/3$ rad						

9. Find the exact value of each below.

a.  $\cos \pi$

b.  $\sin \frac{-\pi}{2}$

c.  $\sec \frac{5\pi}{6}$

d.  $\tan \frac{9\pi}{2}$

e.  $\cot (-60^\circ)$

f.  $\csc 240^\circ$

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

h.  $\cos \frac{2\pi}{3}$

i.  $\csc 570^\circ$

j.  $3\sin(270^\circ)$

k.  $2\tan(45^\circ) + \cos(180^\circ)$

l.  $\sin -7\pi$