

Accel Pre-Calc Unit 1 Intro to Trig Morning Review

1) (Calculator)

A fire is spotted from the top of a 125-foot tall fire tower. If the angle of depression to the fire is  $19^\circ$ , how far is the fire from the base of the tower?

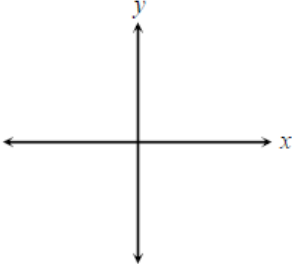
2) (calculator)

A radio station tower was built in two sections. From a point 87 feet from the base of the tower, the angle of elevation of the top of the first section is  $25^\circ$ , and the angle of elevation of the top of the second section is  $40^\circ$ . To the *nearest foot*, what is the height of the top section of the tower?

3) (calculator)

This is the first year Janis is playing softball. She has been practicing her batting. On her last swing the bat made an arc with a radius of 48 inches and swept through  $255^\circ$  of rotation. Assuming the arc is circular, what is the distance the tip of the bat travels to the nearest inch?

4) (non-calculator)

	<p><b>17.</b> <math>P(5, -2)</math> is a point on the terminal side of <math>\theta</math> in standard form. Find the exact values of the trigonometric functions of <math>\theta</math>:</p>		
	$\sin \theta =$	$\cos \theta =$	$\tan \theta =$
	$\csc \theta =$	$\sec \theta =$	$\cot \theta =$

5) Non-calculator

Use the given information to determine sine, cosine, and tangent of  $\theta$ , *unless already given*.

a)  $\tan \theta = \frac{5}{3}$ ;  $\sin \theta < 0$ .

b)  $\sec \theta = \text{undefined}$ ;  $0 \leq \theta \leq \pi$ .

c)  $\sin \theta = 0$ ;  $\sec \theta = 1$ .

6) Name the reference angle to  $\frac{7\pi}{10}$ .

**Find all solutions for  $\theta$  on the given interval. (no calculator)**

7.  $\cot \theta = -\sqrt{3}$ ,  $0^\circ \leq \theta \leq 360^\circ$

\_\_\_\_\_

8.  $\cot \theta = \text{undefined}$ ,  $0 \leq \theta \leq 2\pi$

\_\_\_\_\_

**Evaluate. (no calculator)**

9.  $\cos \frac{-13\pi}{4} =$  \_\_\_\_\_

10.  $\tan 540^\circ =$  \_\_\_\_\_

11.  $\cot \frac{19\pi}{6} =$  \_\_\_\_\_