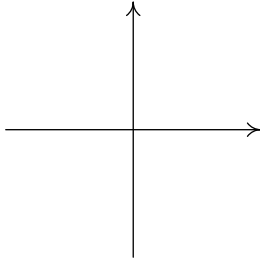
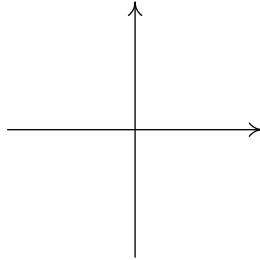


1. Sketch the following angles in standard position:

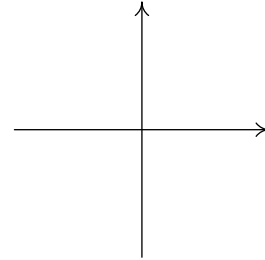
(a) 32°



(b) 128°



(c) -298°



2. Complete the following table:

Angle	Complementary Angle	Supplementary Angle
29°		
	82°	
		173°

3. Complete the following table:

Angle	Least positive coterminal angle	Greatest negative coterminal angle
472°		
791°		
-540°		

4. Perform the following calculations:

(a) $61^{\circ}23' + 21^{\circ}41'$

(b) $23^{\circ}16'51'' - 21^{\circ}43'5''$

5. Convert the following to decimal degrees. Round to the nearest thousandth.

(a) $20^{\circ}54'$

(b) $91^{\circ}35'54''$

6. Convert the following to degrees, minutes, and seconds.

(a) 21.745°

(b) -42.108°

7. A man on a unicycle is peddling fast enough that his wheel turns 20 times every minute. In 3 seconds, how many times has his wheel turned?

8. The propeller on a boat is turning 5 times per second.

(a) How many times will the propeller turn in 3 minutes.

- (b) If the boat is moved forward 2ft every time the propeller turns once, how far will the boat move forward.

9. At 4pm, a flagpole casts a shadow that is 50m long. A man standing near the flagpole casts a shadow that is 4m long. If the man is 1.80m tall, how tall is the flagpole?

10. List the value of the six trigonometric functions if

- (a) the point $(-5, 2)$ lies on the terminal side

$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$

- (b) the equation of the terminal side is $3x - 4y = 0$, $x \leq 0$

$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$

- (c) θ is in quadrant IV, and $\sin \theta = \frac{2}{5}$

$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$