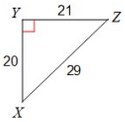
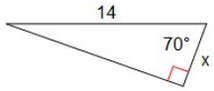
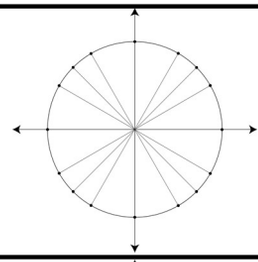
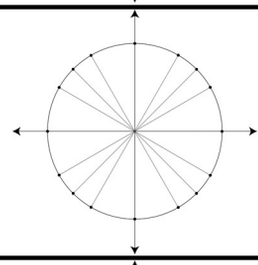
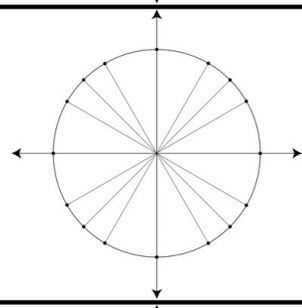
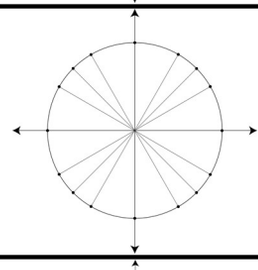
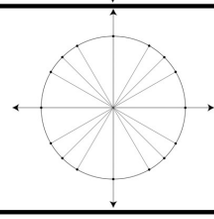
Find the ratios for the trig. functions you know.



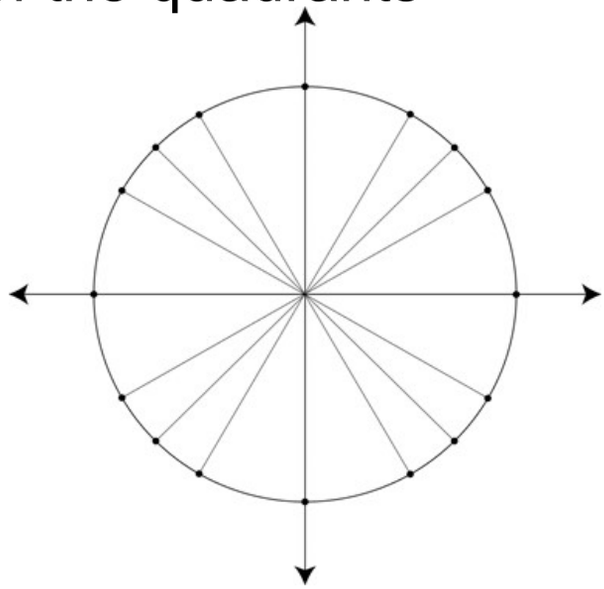
Find the missing side using your calculator. (*where do I round if it doesn't tell me?)



Vocabulary

Term	Definition or "How do I Find It?"	Example
An angle in Standard Position	**When the vertex is at the origin and the initial side lies on the positive side of the x-axis.**	
Initial Side	**The ray that lies on the x-axis when an angle is in standard position, it is where the angle is measured from.**	
Terminal Side	**The resulting ray once the angle is rotated around the origin forms the other side of the angle.**	
Positive Angle	**Produced when the terminal side is rotated counterclockwise around the origin.**	
Negative Angle	**Produced when the terminal side is rotated clockwise around the origin.**	
Coterminal Angles	**Two angles are coterminal when they share the same terminal side.**	Name 2 coterminal angles for 75 degrees:
Reference Angle	**An acute angle between 0 and 90 degrees in relation to the x-axis**	What is the reference angle for 120 degrees? 295 degrees? 540 degrees? -80 degrees?

The story of the quadrants



Find at least two coterminal angles, one positive and one negative.

1. $179°$ $-181°$ $539°$

2. $442°$ $82°$ $-278°$

3. $-800°$

1. Where does pi come from?

2. What do you remember about similar triangles

Radian - One radian is the measure of a central angle, θ that intercepts an arc *s* equal in length to the radius *r* of the circle.

Arc length (s) = Radius (r)

s/r = radian measure of central angle

= s when the corresponding central angle is one full revolution

Conversions

If your traveling 50 miles per 30 minutes. You have traveled 130 miles. How many minutes has it been?

$130 \text{ miles} \cdot \frac{30 \text{ min}}{50 \text{ miles}} \quad \frac{50 \text{ mi}}{30 \text{ min}}$

or $\frac{50 \text{ mile}}{30 \text{ min}} = \frac{130 \text{ miles}}{x \text{ min}}$

If you know there are 5280 feet in a mile and 12 inches in a foot. How many inches have you gone in 1.4 miles?

How do I convert radians into degrees and degrees into radians?

$$\frac{\pi}{180}$$

Convert from Radians to Degrees

$\frac{5\pi}{8} = 112.5^\circ$

$-\frac{7\pi}{3} = -420^\circ$

Convert from Degrees to Radians

$240^\circ = \frac{4\pi}{3}$

$\frac{240^\circ}{x} = \frac{180^\circ}{\pi}$

$50^\circ = \frac{5\pi}{18}$

Find at least two coterminal angles, one positive and one negative.

$=$

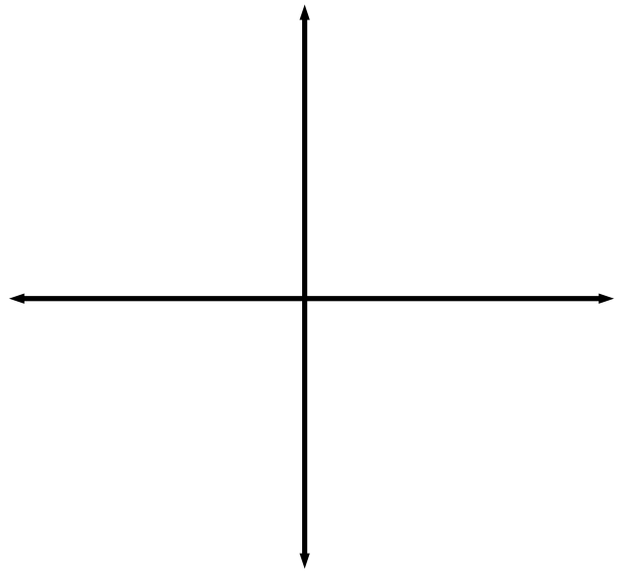
$\frac{\pi}{5}$ $\frac{11\pi}{5}$ $-\frac{9\pi}{5}$

$\frac{29\pi}{4}$ $\frac{37\pi}{4}$ $-\frac{3\pi}{4}$

$-\frac{7\pi}{3}$ $-\frac{11}{3}$ $\frac{5\pi}{3}$

Determine the Reference Angle of each angle.

$\frac{\pi}{5}$

$\frac{29\pi}{4}$

$-\frac{7\pi}{3}$