

CLASS AGENDA

- ◉ Steps for Solving
- ◉ Trig functions of any angle
- ◉ Partner Practice
- ◉ Closure

LEARNING GOALS

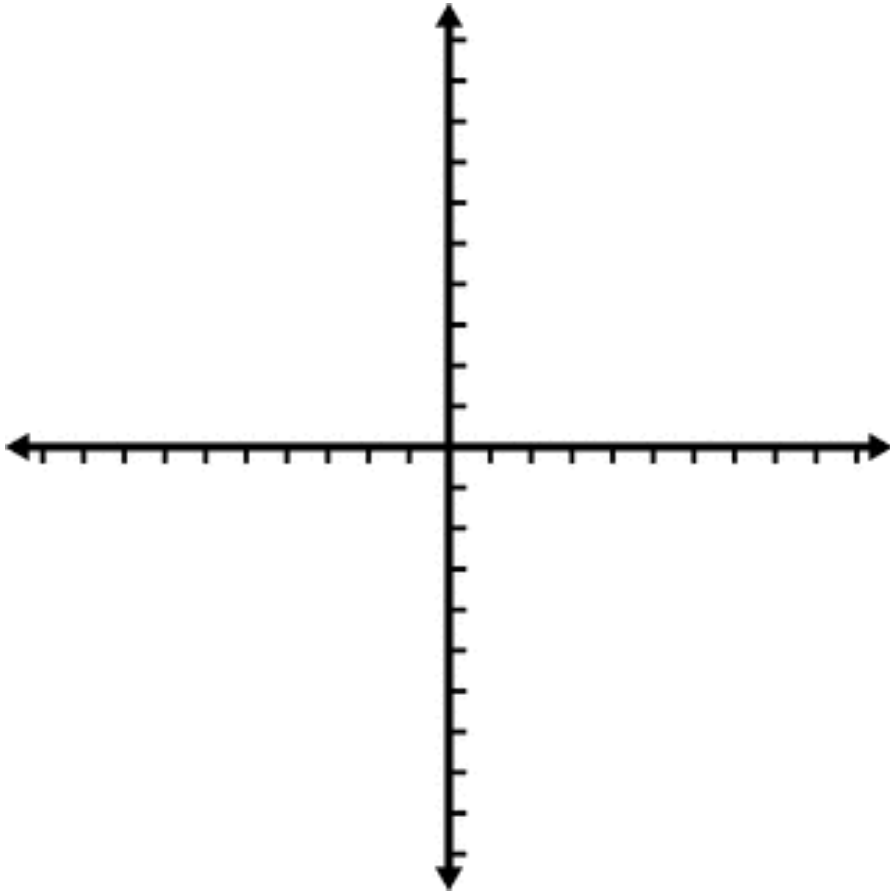
◎ SWBAT:

- Use the definitions of sine, cosine, and tangent to evaluate these functions.
- Use reference angles, calculators, or tables and special angles to evaluate the six trigonometric functions.

STEPS FOR SOLVING TRIG FUNCTIONS

1. Plot the point
2. Connect the point to the origin
3. Connect the point to the X-AXIS
4. Use the coordinates to label the adjacent (x-coordinate) side
5. Use the coordinate to label the opposite (y-coordinate) side
6. Use the Pythagorean theorem to find the value of the missing side (hypotenuse)
7. Solve for the trig functions (SIMPLIFY, if necessary).

COORDINATES AND ANGLES



1. $(3, 4)$
2. $(-5, 12)$
3. $(-7, -24)$
4. $(9, -40)$

TRIG FUNCTIONS OF ANY ANGLE

Using Coordinates to solve trig functions

$$\sin(\theta) = \frac{y}{r}$$

$$\cos(\theta) = \frac{x}{r}$$

$$\tan(\theta) = \frac{y}{x}$$

$$\csc(\theta) = \frac{r}{y}$$

$$\sec(\theta) = \frac{r}{x}$$

$$\cot(\theta) = \frac{x}{y}$$

$$x \neq 0$$

$$y \neq 0$$

$$r = \sqrt{x^2 + y^2}$$

CLOSURE