

## Working with x and y Intercepts - Supplemental Questions with Solutions

1. A line in the Cartesian plane has the following characteristics:

- Its x intercept is 10
- Its y intercept is -8

What is the slope of this line?

Remember:

y intercept,  $x = 0$

x intercept,  $y = 0$

∴ Two points: (10,0) and (0,-8)

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-8 - 0}{0 - 10} = \frac{-8}{-10} = \frac{+8}{10} = \frac{4}{5}$$

2. What is the intercept of the line associated with the equation  $3x + 4y = 12$ ?

y intercept is when  $x = 0$

$$3x + 4y = 12$$

$$3(0) + 4y = 12$$

$$\frac{4y}{4} = \frac{12}{4}$$

$$y = 3$$