Day 42: Direct Variation

**Direct Variation**—a function of the form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, where k ≠ 0.

* k is the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”
	+ it is the coefficient of x
* The variables y and x are said to “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”
* When graphed, the y-intercept (b) is \_\_\_\_\_\_\_\_\_\_\_\_\_.

Example 1: Example 2:

 y = 3x y = -x

Constant of Variation: Constant of Variation:

Graph: Graph:

Tell whether the equation is direct variation. If it is, find the constant of variation.

1. y = 2x 2) 2x + 5y = 1 3) -12x = 6y

4) y + 8 = -x 5) 5x – 6y = 0 6) -x = 10y

Write an equation of direct variation that includes the given point:

1. (1, 5) 2) (-8, 10) 3) (-6, 1) 4) (3, -4)

Assume that y varies directly with x:

5) If y = 28 when x = 7, find x when y = 52

6) If y = 2.5 when x = 0.5, find x when y = 20

7) If y = 4 when x = 12, find y when x = -24

8) If y = 2 $\frac{2}{3}$ when x = ¼ , find y when x = 1 $\frac{1}{8}$