$$\text{Rate of Change} = \frac{\text{Change in the Dependent Variable}}{\text{Change in the Independent Variable}}$$

$$\text{Rate of Change} = \frac{\triangle Y}{\triangle X}$$

Slope with units

Since the phrase Rate of Change applies when using "REAL" data you'll be expected to give units with your answer.

You should give rate of change as an integer or a decimal.

Don't confuse Rate of Change with Direct Variation

$$\frac{y_2 - y_1}{x_2 - x_1} \quad \text{NOT} \quad \frac{y}{x}$$

Bellwork Friday, February 14, 2014

For 1 and 2, find the rate of change in each.
Include units with your answer.

1.

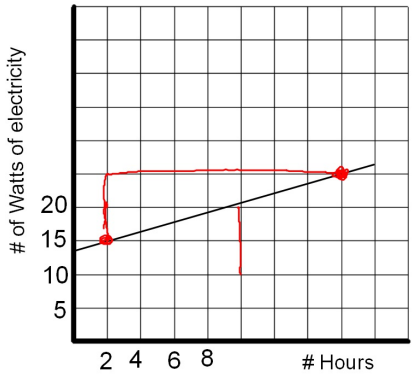
# of Weeks	$ in Savings
3	4425
7	3925
9	3675
11	3425
15	2925

3-7 = -4

4425 - 3925 = 500

$\frac{500}{-4} = -125$ \$/wk

2.



(2, 15) (16, 25)

$\frac{10}{14} = 0.7$ w/h

$\frac{2 \times 5}{7 \times 2} = \frac{10}{14}$

$$\text{Slope} = \frac{\text{Rise}}{\text{Run}} = \frac{\text{Vertical Change}}{\text{Horizontal Change}} = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

You should give slope as an integer or a fraction in reduced form.

Find the slope of the line that passes through each pair of points

3. (7, -3) and (-5, 12)

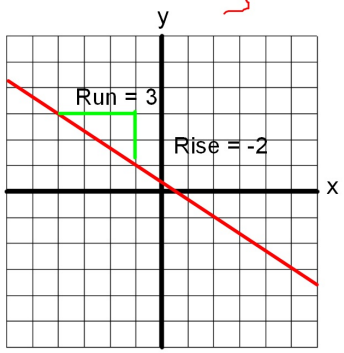
m= $\frac{12 - -3}{-5 - 7} = \frac{15}{-12} = -\frac{5}{4}$

4. (1, 9) and (1, -8)

m= undefined $\frac{-8 - 9}{1 - 1} = \frac{-17}{0}$

Find the slope of each line.

5. m= $-\frac{2}{3}$



6. m= 0