4.1 Find Slope and Rate of Change Date: _____

Slope: Can be thought of as a _____ or a _____.

Formula:

$$m = \frac{\text{change in } y}{\text{change in } x} = \frac{y-y}{x-x}$$

(x, y)

$m = \frac{\text{rise}}{\text{run}}$ (+ ↑, − ↓, − ←, + →)

Negative	Positive	Zero	Undefined
			

To find the slope, pick 2 points and use the formula.

Ex.1: Find the slope if the line that passes through (6, 4) (4, 0).

(x y, x y)

$$m = \frac{4-0}{6-4} = \frac{4}{2}$$

(x y, x my) = 2 OR $\frac{2}{1}$

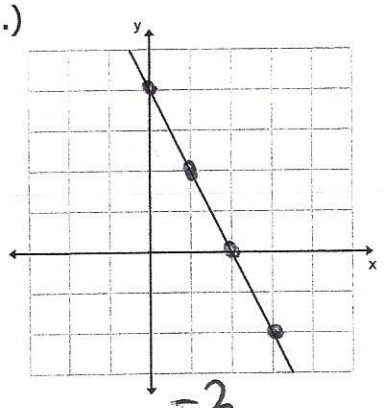
Ex.2: Find the slope if the line that passes through (-4, 2) (2, 6).

$$m = \frac{2-6}{-4-2} = \frac{-4}{-6}$$

m = $\frac{2}{3}$

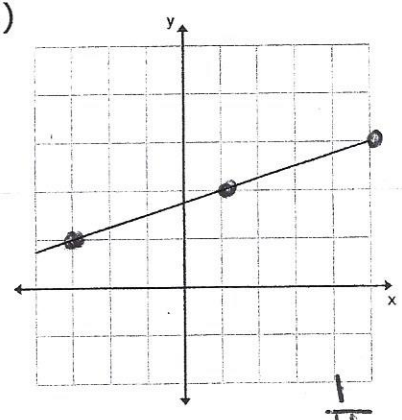
Ex.3: Find the slope of the line shown:

a.)



m = $\frac{-2}{1}$

b.)



m = $\frac{1}{4}$

Homework: