

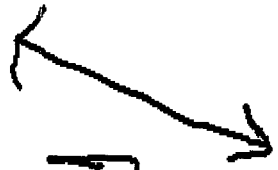

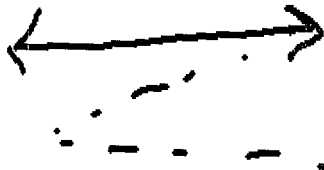

9/16/18

Topic: Slope

def.

Slope: The steepness of a line / line segment.

Different Types of Slope: No/undefined

- 1)  Positive
- 2)  Zero
- 3)  No/undefined
- 4)  Negative

## Slope Formula

$$m = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{y_1 - y_2}{x_1 - x_2}$$

Ex. 1: Find the slope of a line that contains the points  $(-4, 6)$  and  $(10, 3)$ .

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 3}{-4 - 10} = \frac{3}{-14} = -\frac{3}{14}$$

Ex: Find the slope of a line that

contains  $(-3, 5)$  and  $(-3, 4)$ .

$$m = \frac{5-4}{-3-3} = \frac{1}{0} = \text{undefined}$$

no slope

Ex: Find the value of  $x$  in the following:

If the slope of a line is  $-\frac{2}{3}$  and 2 points on the line are  $(-2, 4)$  and  $(x, -2)$ .