

NAME: _____

SLOPE REFERENCE SHEET!

From a Table

- Find the constant rate of the x and y values
- Write the slope as $\frac{\Delta y}{\Delta x}$

Table 1

x	y
1	3
2	8
3	13
4	18
5	23
6	28

Table 2

x	y
3	24
6	20
9	16
12	12
15	8
18	4

Slope for table 1

$$\frac{\Delta y}{\Delta x} = \frac{5}{1}$$

Slope for table 2

$$\frac{\Delta y}{\Delta x} = \frac{-4}{3}$$

From a Graph

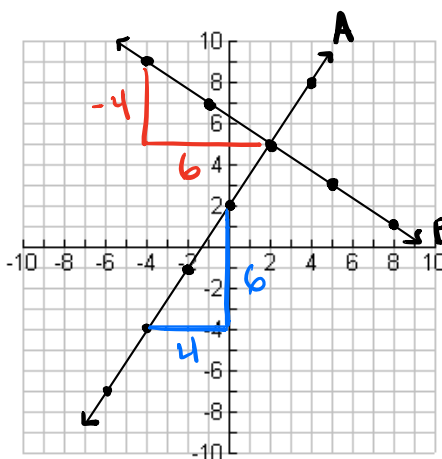
- Choose two points on the line
- Count the rise then the run
- Write the slope as $\frac{\Delta y}{\Delta x}$ or $\frac{\text{rise}}{\text{run}}$

Slope of Line A:

$$\frac{6}{4} \text{ or } \frac{3}{2}$$

Slope of Line B:

$$\frac{-4}{6} = -\frac{2}{3}$$



What is SLOPE?

Slope describes the steepness of a line.

$$\frac{\Delta y}{\Delta x}$$

$$\frac{\text{rise}}{\text{run}}$$

- Solve the equation for y
- Slope is the rate of change therefore, it is next to the variable x.
- The slope is the coefficient of x.

$$y = mx + b$$

1. $y = 2x + 4$ Slope: 2

2. $y = 1.5x - 19$ Slope: 1.5

3. $y = \frac{4}{11}x - 7$ Slope: $\frac{4}{11}$

4. $y = 3x + 6 - 8 + 10x$ Slope: 13
 $y = 13x - 2$

5. $2(x + 8) + y = 4$ Slope: -2
 $2x + 16 + y = 4$
 $2x + y = -12$
 $-2x$
 $y = -2x - 12$

- Label the x and y coordinates.
- Find the change of y and the change of x by subtracting
- Write the slope as the change of y over the change of x.

1. $(x_1, y_1) = (1, 3)$ and $(x_2, y_2) = (4, 8)$
 $\frac{\Delta y}{\Delta x} = \frac{8 - 3}{4 - 1} = \frac{5}{3} = \text{slope}$

2. $(x_1, y_1) = (3, -20)$ and $(x_2, y_2) = (5, 8)$
 $\frac{8 - (-20)}{5 - 3} = \frac{28}{2} = \frac{14}{1}$

3. $(x_1, y_1) = (-4, 7)$ and $(x_2, y_2) = (-6, -4)$
 $\frac{-4 - 7}{-6 - (-4)} = \frac{-13}{-2} = \frac{13}{2}$

From an Equation

From Two Points