

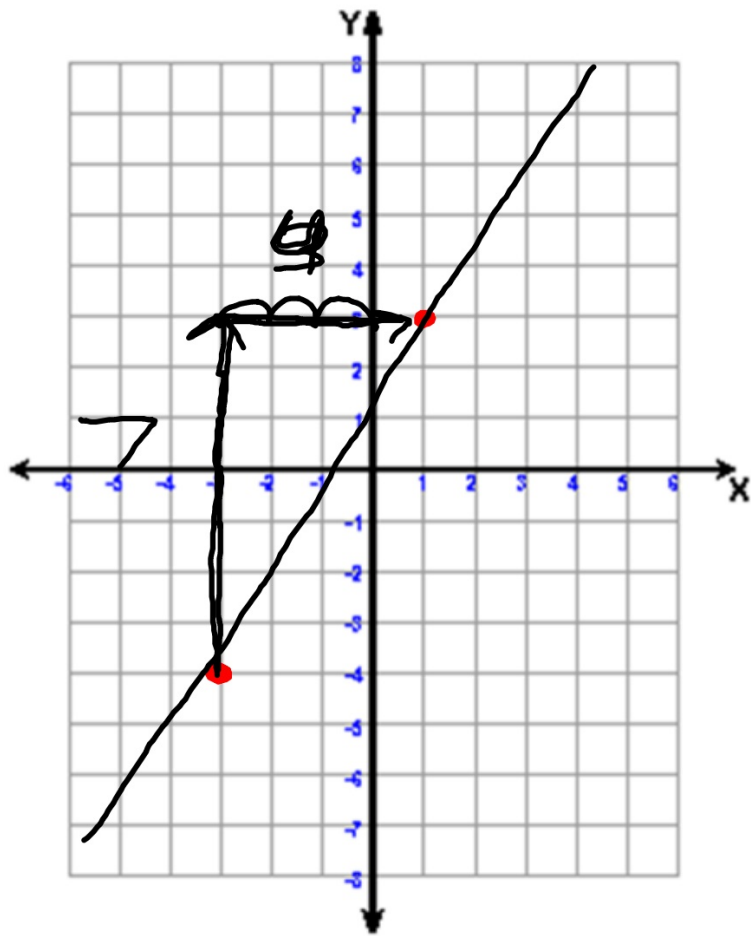
## 5.5 Slope

---

### Learning Targets:

- Find the Slope of a Line
- Graph Lines from a Table
- Interpret the Slope of a Line

$$\frac{y}{x} = \sqrt{\frac{y}{x}}$$



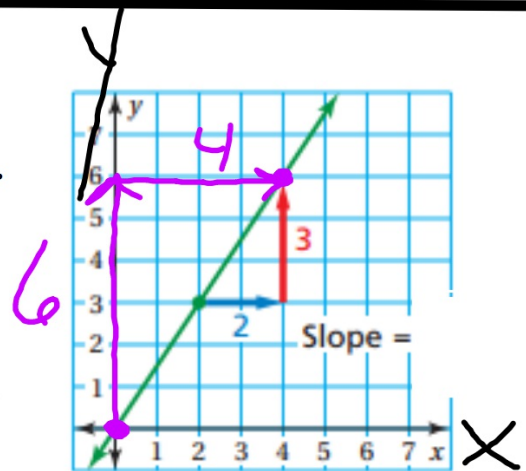
# Find the Slope of a Line

Slope is the rate of change between any two points on a line.

It is a measure of the **STEEPNESS** of a line.

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

Slope is the ratio of the **change in y** (vertical change) to the **change in x** (horizontal change)

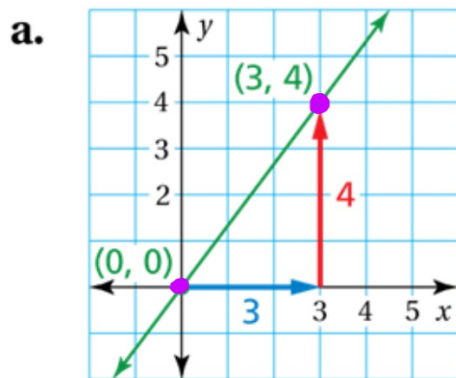


$$\text{slope} = \frac{\text{change in } y}{\text{change in } x}$$

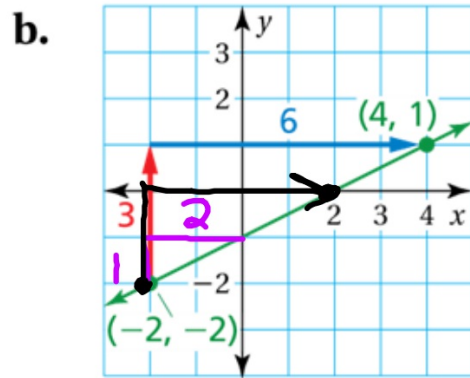
$$\frac{6}{4} = \frac{3}{2} \quad \text{slope} = \frac{3}{2}$$

# Find the Slope of a Line

Find the slope of each line.



$$\text{slope} = \frac{\text{change in } y}{\text{change in } x}$$
$$\frac{\Delta y}{\Delta x} = \boxed{\frac{4}{3}}$$



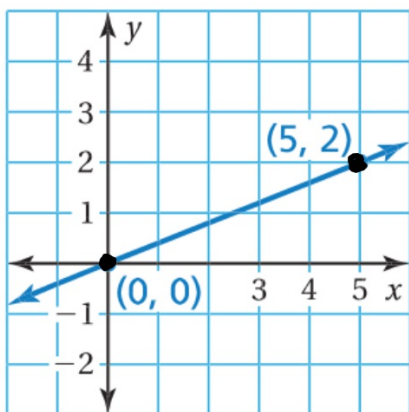
$$\text{slope} = \frac{\text{change in } y}{\text{change in } x}$$
$$\frac{3}{6} = \boxed{\frac{1}{2}}$$

# Find the Slope of a Line

---

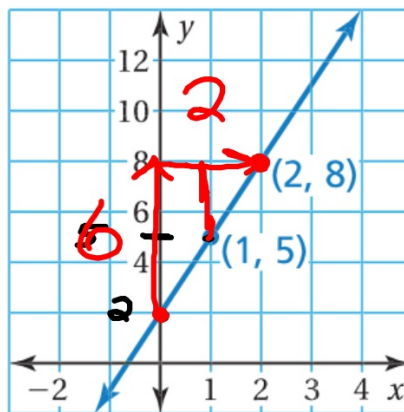
Find the slope of the line.

1.



$\frac{2}{5}$

2.



$$\frac{6}{2} = \frac{3}{1} = 3$$

# Graphing and Interpreting Slope

The table shows your earnings for babysitting.

- Graph the data.
- Find and interpret the slope of the line through the points.

Hours, $x$	0	2	4	6	8	10
Earnings, $y$ (dollars)	0	10	20	30	40	50

(Talk about choosing units and labeling graph)

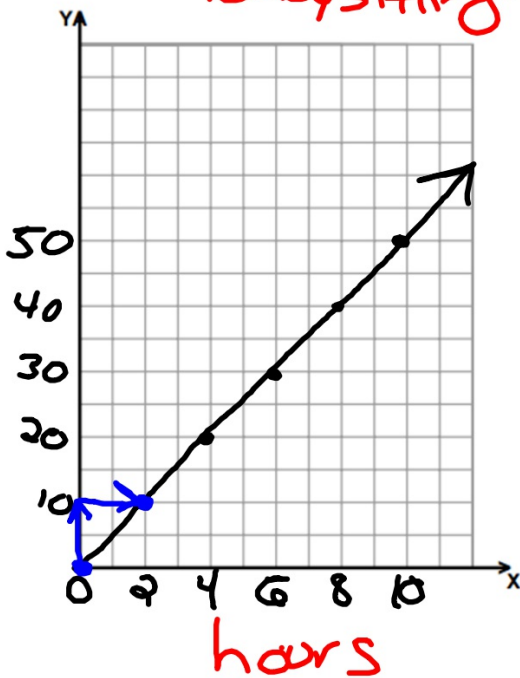
- Graph the data. Draw a line through the points.
- Choose any two points to find the slope of the line.

### Graph the data.

Hours, x	0	2	4	6	8	10
Earnings, y (dollars)	0	10	20	30	40	50

Babysitting

Work--cdon



$$\frac{\Delta y}{\Delta x} = \frac{10}{2} = \boxed{\frac{5}{1}}$$

Interpret slope  
y \$ = 5  
x hrs = 1  
I make \$5 per hour

Find and interpret the slope of the line through the points.





# Graphing and Interpreting Slope

The graph shows the amounts you and your friend earn babysitting.



- a. Compare the steepness of the lines. What does this mean in the context of the problem?

Your Friend's line is steeper so your friend's rate of pay is greater than yours.

- b. Find and interpret the slope of the blue line.

The slope is  $\frac{7}{1}$  or 7. Your friend earns \$7 per hour

# Homework

page 196

#2-10

#12, 16, 17

You will need graph paper

.