

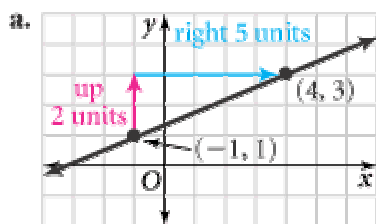
Algebra  
Slope

Name: \_\_\_\_\_  
Period: \_\_\_\_\_

The \_\_\_\_\_ of a line is its rate of change.

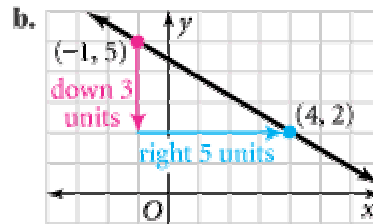
$$\text{Slope} = \frac{\text{Change in } y (\Delta y)}{\text{Change in } x (\Delta x)} = \frac{\text{rise}}{\text{run}}$$

Examples: Find the slope of a line using a graph.



$$\begin{aligned} \text{slope} &= \frac{\text{rise}}{\text{run}} \\ &= \frac{3 - 1}{4 - (-1)} \\ &= \frac{2}{5} \end{aligned}$$

The slope of the line is  $\frac{2}{5}$ .



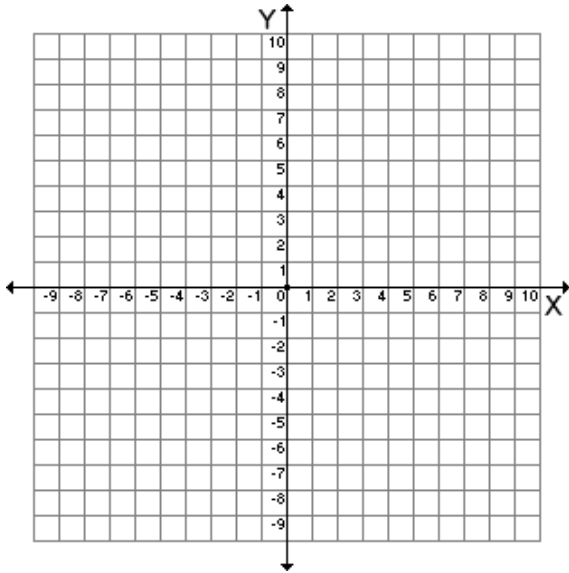
$$\begin{aligned} \text{slope} &= \frac{\text{rise}}{\text{run}} \\ &= \frac{2 - 5}{4 - (-1)} \\ &= \frac{-3}{5} = -\frac{3}{5} \end{aligned}$$

The slope of the line is  $-\frac{3}{5}$ .

A line that slants upward from left to right has a \_\_\_\_\_ slope.

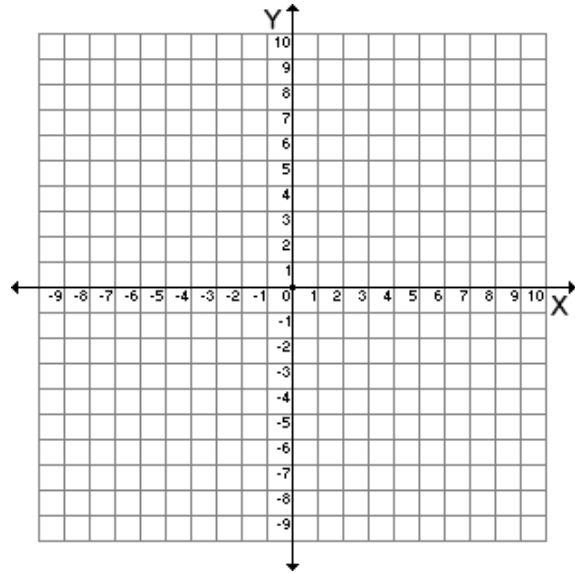
A line that slants downward from left to right has a \_\_\_\_\_ slope.

You try: Find the slope of each line using rise over run.



Rise = \_\_\_\_\_ Run = \_\_\_\_\_

Slope = \_\_\_\_\_

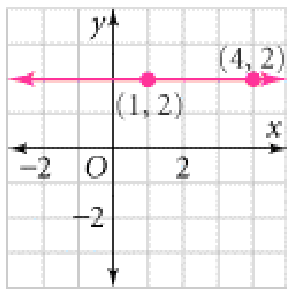


Rise = \_\_\_\_\_ Run = \_\_\_\_\_

Slope = \_\_\_\_\_

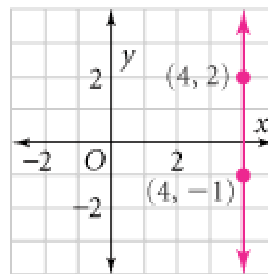
### Slope of Horizontal and Vertical Lines

Find the slope of each line.



Rise = \_\_\_\_\_ Run = \_\_\_\_\_

Slope = \_\_\_\_\_



Rise = \_\_\_\_\_ Run = \_\_\_\_\_

Slope = \_\_\_\_\_

### Calculating Slope using Points

We can calculate the slope of a line if we know two points that lie on the line.

$$\text{Slope} = \frac{\text{Change in } y (\Delta y)}{\text{Change in } x (\Delta x)}$$

**Examples:** Find the slope of the line that passes through the following points.

1. (5, 6), (3, 2)

2. (4, 8), (8, 11)

2. (-7, 1), (7, 8)

4. (5, 8), (5, 2)

5. (2, 3), (-6, 3)