

Warm Up

2/7/19

1. Determine whether the relation $\{(7, 2), (-10, 3), (-5, -1), (7, 3)\}$ is a function. Explain.

Not a function

2. Find $f(-6)$ if $f(x) = -2x + 20$

$$f(-6) = -2(-6) + 20 \quad (-6, 32)$$

$$f(-6) = 32$$

3. Solve: $14 - x = x + 60$

$$\begin{array}{r} -x \quad -x \\ \hline 14 - 2x = 60 \\ -14 \quad -14 \\ \hline -2x = 46 \\ \hline -2 \quad -2 \\ \hline x = -23 \end{array}$$

4. If $10 - (3x + 5) > 26$ and x is an integer, what is the greatest value of $x - 4$?

$$10 - (3x + 5) > 26$$

$$10 - 3x - 5 > 26$$

$$5 - 3x > 26$$

$$\begin{array}{r} 5 - 3x > 26 \\ -5 \quad -5 \\ \hline -3x > 21 \\ \hline -3 \quad -3 \\ \hline x < -7 \end{array}$$

$$x - 4$$

$$-8 - 4 = -12$$

SLOPE



SLOPE

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

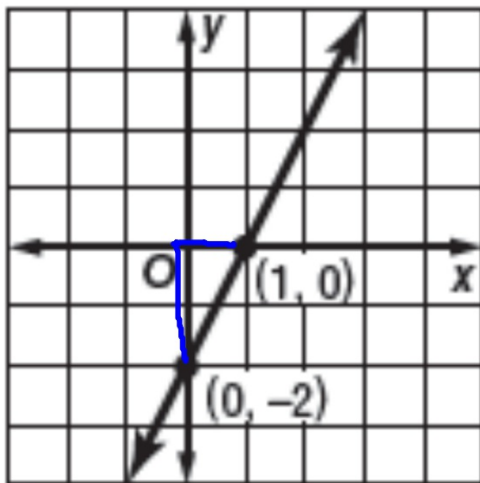
Four types of slope:

- Positive
- Negative
- Zero slope
- Undefined

$\frac{y_2 - y_1}{x_2 - x_1}$

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

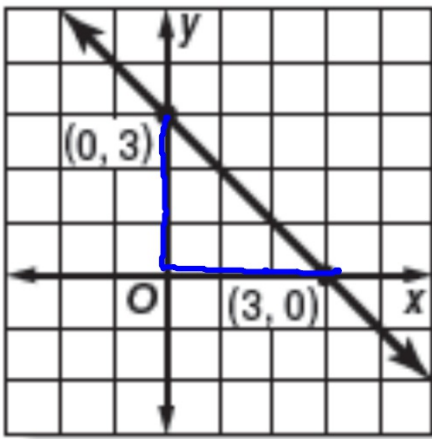
Use when given a graph and asked to find slope



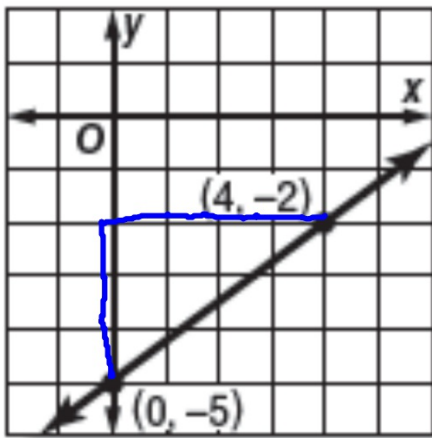
$$\text{rise} = 2$$

$$\text{run} = 1$$

$$\text{slope} = \frac{2}{1} = \boxed{2}$$

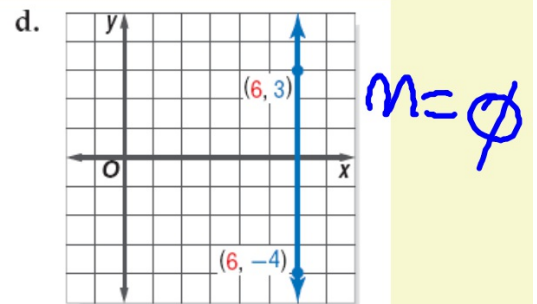
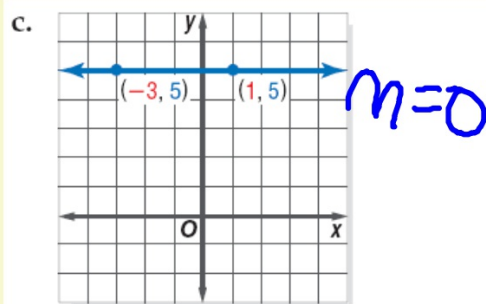
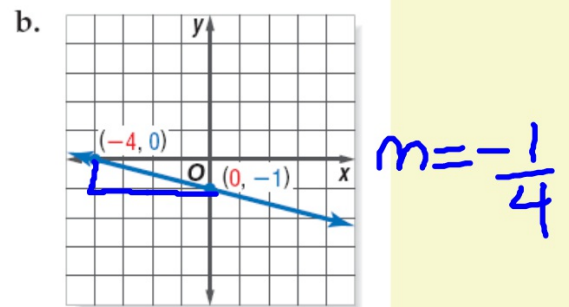
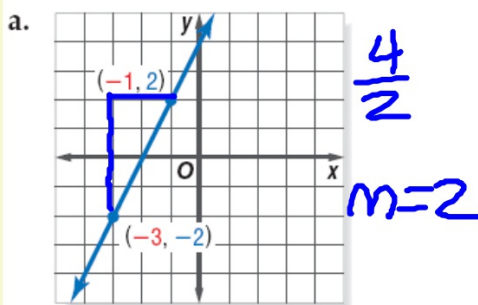


$$\frac{-3}{3} = -1$$



$$\frac{3}{4}$$

Find the slope of each line.



When given two points, you find the slope by using the formula:

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

(x_1, y_1)

(x_2, y_2)

x_1, y_1, x_2, y_2
1. $(-4, 7), (-10, 9)$

$$m = \frac{9-7}{-10-(-4)} = \frac{2}{-6} = \boxed{-\frac{1}{3}}$$

2. $(12, 6), (-2, 10)$

$$m = \frac{10-6}{-2-12} = \frac{4}{-14} = \boxed{-\frac{2}{7}}$$

3. $(-5, -4), (-5, 10)$

$$m = \emptyset$$

4. $(6, -2), (0, -5)$

$$m = \frac{-5-(-2)}{0-6} = \frac{-3}{-6} = \boxed{\frac{1}{2}}$$

5. $(3, 10), (-15, 4)$

$$m = \frac{4-10}{-15-3} = \frac{-6}{-18} = \boxed{\frac{1}{3}}$$

6. $(0, 9), (-16, 9)$

$$m = 0$$