

**LESSON**  
**5-4** **Practice B**  
**The Slope Formula**

Find the slope of the line that contains each pair of points.

1. (2, 8) and (1, -3)

2. (-4, 0) and (-6, -2)

3. (0, -2) and (4, -7)

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

$$= \frac{\boxed{\phantom{00}} - \boxed{\phantom{00}}}{\boxed{\phantom{00}} - \boxed{\phantom{00}}}$$

$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \boxed{\phantom{00}}$$

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

$$= \frac{\boxed{\phantom{00}} - \boxed{\phantom{00}}}{\boxed{\phantom{00}} - \boxed{\phantom{00}}}$$

$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \boxed{\phantom{00}}$$

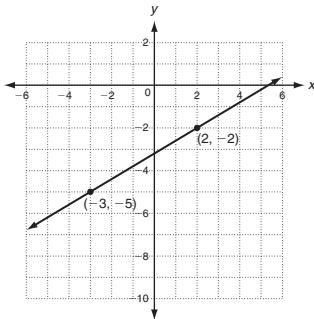
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{\boxed{\phantom{00}} - \boxed{\phantom{00}}}{\boxed{\phantom{00}} - \boxed{\phantom{00}}}$$

$$= \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \boxed{\phantom{00}}$$

Each graph or table shows a linear relationship. Find the slope.

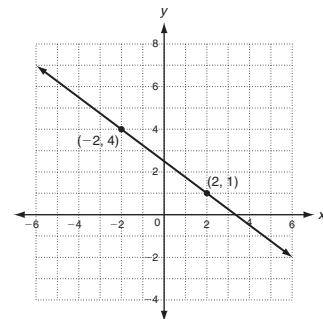
4.



5.

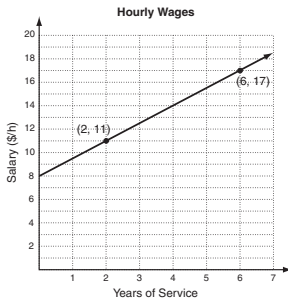
x	y
1	3.75
2	5
3	6.25
4	7.50
5	8.75

6.

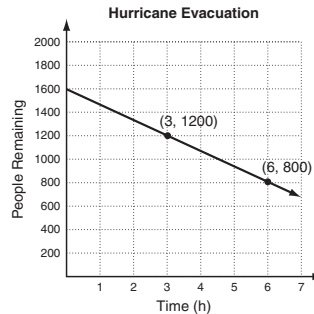


Find the slope of each line. Then tell what the slope represents.

7.



8.



Find the slope of the line described by each equation.

9.  $3x + 4y = 24$

10.  $8x = 48 + 3y$

**LESSON 5-4 Practice A**  
**The Slope Formula**

Find the slope of the line that contains each pair of points.

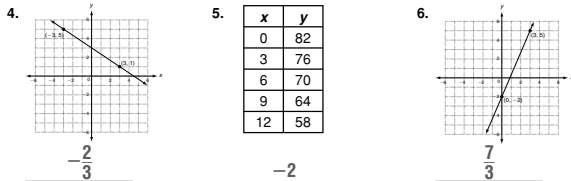
1. (3, 1) and (9, 2)      2. (-2, 3) and (2, -1)      3. (4, 6) and (0, -2)

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 1}{9 - 3} = \frac{1}{6}$$

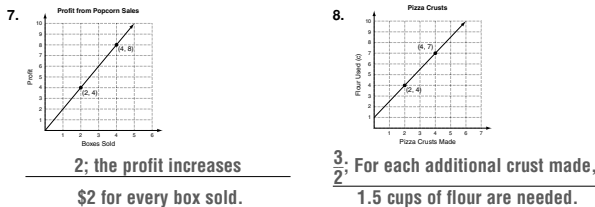
$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - 3}{2 - (-2)} = \frac{-4}{4} = -1$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-2 - 6}{0 - 4} = \frac{-8}{-4} = 2$$

Each graph or table shows a linear relationship. Find the slope.



Find the slope of each line. Then tell what the slope represents.



Complete the steps to find the slope of the line described by  $2x + 5y = 10$ .

9. a. Find the x-intercept.      b. Find the y-intercept.      c. The line contains  $(-5, 0)$  and  $(0, -2)$ . Use the slope formula.

$$2x + 5(0) = -10 \implies 2x = -10 \implies x = -5$$

$$2(0) + 5y = -10 \implies 5y = -10 \implies y = -2$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-2 - 0}{0 - (-5)} = \frac{-2}{5}$$

**LESSON 5-4 Practice B**  
**The Slope Formula**

Find the slope of the line that contains each pair of points.

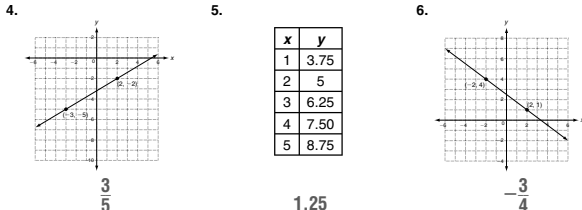
1. (2, 8) and (1, -3)      2. (-4, 0) and (-6, -2)      3. (0, -2) and (4, -9)

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-3 - 8}{1 - 2} = \frac{-11}{-1} = 11$$

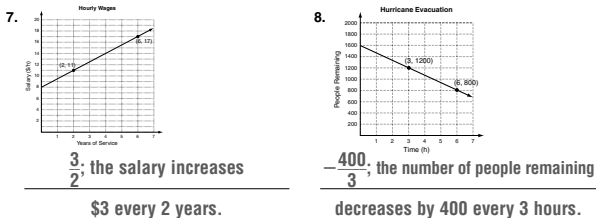
$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-2 - 0}{-6 - (-4)} = \frac{-2}{-2} = 1$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-9 - (-2)}{4 - 0} = \frac{-7}{4} = -\frac{7}{4}$$

Each graph or table shows a linear relationship. Find the slope.



Find the slope of each line. Then tell what the slope represents.



Find the slope of the line described by each equation.

9.  $3x + 4y = 24$       10.  $8x = 48 + 3y$

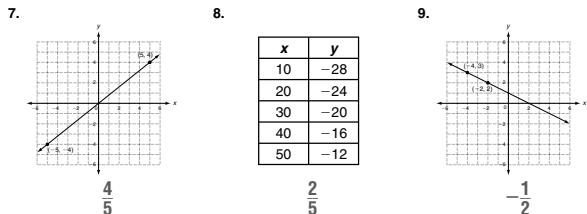
$$-\frac{3}{4} \qquad \frac{8}{3}$$

**LESSON 5-4 Practice C**  
**The Slope Formula**

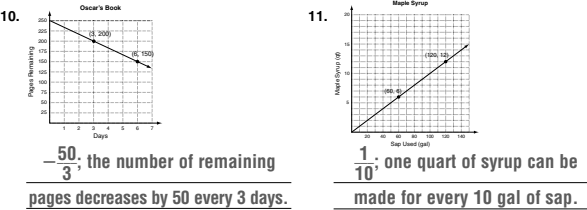
Find the slope of the line that contains each pair of points.

1. (2, -5) and (4, 3)      2. (0, -4) and (7, 1)      3. (6, 2) and (-9, -1)
- $$m = \frac{4}{2} = 2$$
- $$m = \frac{5}{7}$$
- $$m = \frac{1}{5}$$
4. (8, 8) and (2, -10)      5. (0, -1) and (-3, -1)      6. (6, 1) and (5, -2)
- $$m = \frac{-18}{-6} = 3$$
- $$m = \frac{0}{-3} = 0$$
- $$m = \frac{-3}{-1} = 3$$

Each graph or table represents a linear relationship. Find the slope.



Find the slope of each line. Then tell what the slope represents.



Find the slope of the line described by each equation.

12.  $7x - 6y = 42$       13.  $5x + 2y = 20$       14.  $-2x - 8y = 24$

$$\frac{7}{6} \qquad -\frac{5}{2} \qquad -\frac{1}{4}$$

15.  $64 - 4y = -16x$       16.  $8x = 4y - 1$       17.  $y = 6x - 10$

$$4 \qquad 2 \qquad 6$$

**LESSON 5-4 Reteach**  
**The Slope Formula**

You can find the slope of a line from any two ordered pairs. The ordered pairs can be given to you, or you might need to read them from a table or graph.

Find the slope of the line that contains  $(-1, 3)$  and  $(2, 0)$ .

Step 1: Name the ordered pairs. (It does not matter which is first and which is second.)

first ordered pair  $(-1, 3)$       second ordered pair  $(2, 0)$

Step 2: Label each number in the ordered pairs.

$(-1, 3)$        $(2, 0)$   
 $(x_1, y_1)$        $(x_2, y_2)$

Step 3: Substitute the ordered pairs into the slope formula.

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{0 - 3}{2 - (-1)} = \frac{-3}{3} = -1$$

The slope of the line that contains  $(-1, 3)$  and  $(2, 0)$  is  $-1$ .

Find the slope of each linear relationship.

