

**LESSON**  
**12-4 Practice A**  
***Point-Slope Form***

Use the point-slope form of each equation to identify the slope of the line.

1.  $y - 1 = 2(x - 3)$

\_\_\_\_\_

2.  $y + 4 = -1(x + 7)$

\_\_\_\_\_

3.  $y - 7 = -3(x + 8)$

\_\_\_\_\_

Use the point-slope form of each equation to identify a point each line passes through.

4.  $y - 1 = -2(x - 4)$

\_\_\_\_\_

5.  $y + 3 = -5(x - 1)$

\_\_\_\_\_

6.  $y + 5 = -2(x + 6)$

\_\_\_\_\_

Use the point-slope form of each equation to identify a point the line passes through and the slope of the line.

7.  $y - 9 = 2(x - 3)$

\_\_\_\_\_

\_\_\_\_\_

8.  $y + 6 = -3(x - 1)$

\_\_\_\_\_

\_\_\_\_\_

9.  $y + 1 = -7(x + 2)$

\_\_\_\_\_

\_\_\_\_\_

10.  $y + 2 = -6(x - 7)$

\_\_\_\_\_

\_\_\_\_\_

11.  $y + 6 = -5(x + 9)$

\_\_\_\_\_

\_\_\_\_\_

12.  $y - 3 = \frac{1}{3}(x + 9)$

\_\_\_\_\_

\_\_\_\_\_

Write the point-slope form of the equation with the given slope that passes through the indicated point.

13. the line with slope  $-4$  passing through  $(5, 4)$

\_\_\_\_\_

14. the line with slope  $2$  passing through  $(-1, -2)$

\_\_\_\_\_

## LESSON 12-3 Problem Solving

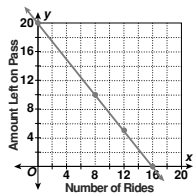
### Using Slopes and Intercepts

Write the correct answer.

- Jaime purchased a \$20 bus pass. Each time she rides the bus, \$1.25 is deducted from the pass. The linear equation  $y = -1.25x + 20$  represents the amount of money on the bus pass after  $x$  rides. Identify the slope and the  $x$ - and  $y$ -intercepts. Graph the equation at the right.

$x$ -intercept = 16.

$y$ -intercept = 20, slope =  $-1.25$



- The rent charged for space in an office building is related to the size of the space rented. The rent for 600 square feet of floor space is \$750, while the rent for 900 square feet is \$1150. Write an equation for the rent  $y$  based on the square footage of the floor space  $x$ .

$y = \frac{4}{3}x - 50$

Choose the letter of the correct answer.

- A limousine charges \$35 plus \$2 per mile. Which equation shows the total cost of a ride in the limousine?  
 A  $y = 35x + 2$     C  $y = 2x - 35$   
 B  $y = 2x + 35$     D  $2x + 35y = 2$
- A newspaper pays its delivery people \$75 each day plus \$0.10 per paper delivered. Which equation shows the daily earnings of a delivery person?  
 F  $y = 0.1x + 75$     H  $x + 0.1y = 75$   
 G  $y = 75x + 0.1$     J  $0.1x + y = 75$
- Antonio's weekly allowance is given by the equation  $A = 0.5c + 10$ , where  $c$  is the number of chores he does. If he received \$16 in allowance one week, how many chores did he do?  
 F 10    H 14  
 G 12    J 15

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## LESSON 12-3 Reading Strategies

### Use a Visual Model

Refer to the coordinate plane at the right. Find the point where the line crosses the  $x$ -axis. This point is called the  $x$ -intercept.

- What is the  $y$ -value of the ordered pair for this point?

0

Find the point where the line crosses the  $y$ -axis. This point is called the  $y$ -intercept.

- What is the  $x$ -value of the ordered pair for this point?

0

- Which axis does the line cross at the  $x$ -intercept?

the  $x$ -axis

- Name the ordered pair for the point where the line crosses the  $x$ -axis.

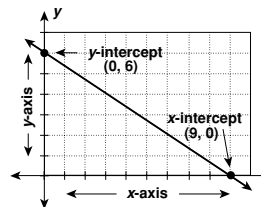
(9, 0)

- Which axis does the line cross at the  $y$ -intercept?

$y$ -axis

- Name the ordered pair for the point where the line crosses the  $y$ -axis.

(0, 6)



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## LESSON 12-3 Puzzles, Twisters & Teasers

### Word Bath!

Circle words from the list in the word search (horizontally, vertically or diagonally). Find a word that answers the riddle.

intercept    slope    form    graph    coordinate  
axis    point    line    rate    change

C H A N G E L I N E F Q  
O L H J U I R N R T O W  
O P E E R T Y T Y U R E  
R F G A S K I E O M M P  
D C V B N A L R P L M O  
I W E R T Y U C N K O I  
N D F G H J K E B J I N  
A X T S L O P E U H T  
T A S D F R A T E V G Y  
E G R A P H C X Z A S D

Why did the robber take a bath?

Because he wanted to make a clean getaway.



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## LESSON 12-4 Practice A

### Point-Slope Form

Use the point-slope form of each equation to identify the slope of the line.

1.  $y - 1 = 2(x - 3)$

2.  $y + 4 = -1(x + 7)$

3.  $y - 7 = -3(x + 8)$

$m = 2$

$m = -1$

$m = -3$

Use the point-slope form of each equation to identify a point each line passes through.

4.  $y - 1 = -2(x - 4)$

5.  $y + 3 = -5(x - 1)$

6.  $y + 5 = -2(x + 6)$

$(x_1, y_1) = (4, 1)$

$(x_1, y_1) = (1, -3)$

$(x_1, y_1) = (-6, -5)$

Use the point-slope form of each equation to identify a point the line passes through and the slope of the line.

7.  $y - 9 = 2(x - 3)$

8.  $y + 6 = -3(x - 1)$

9.  $y + 1 = -7(x + 2)$

$m = 2;$

$m = -3;$

$m = -7;$

$(x_1, y_1) = (3, 9)$

$(x_1, y_1) = (1, -6)$

$(x_1, y_1) = (-2, -1)$

10.  $y + 2 = -6(x - 7)$

11.  $y + 6 = -5(x + 9)$

12.  $y - 3 = \frac{1}{3}(x + 9)$

$m = -6;$

$m = -5;$

$m = \frac{1}{3};$

$(x_1, y_1) = (7, -2)$

$(x_1, y_1) = (-9, -6)$

$(x_1, y_1) = (-9, 3)$

Write the point-slope form of the equation with the given slope that passes through the indicated point.

- the line with slope  $-4$  passing through  $(5, 4)$

$y - 4 = -4(x - 5)$

- the line with slope  $2$  passing through  $(-1, -2)$

$y + 2 = 2(x + 1)$

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