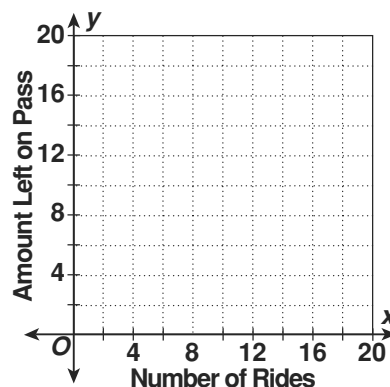


LESSON **Problem Solving**
12-3 *Using Slopes and Intercepts*

Write the correct answer.

1. 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.



2. 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 .

Choose the letter of the correct answer.

3. 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** $2x + 35y = 2$
4. 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** $0.1x + y = 75$
5. A friend gave Ms. Morris a \$50 gift card for a local car wash. If each car wash costs \$6, which equation shows the number of dollars left on the card?
A $50x + 6y = 1$ **C** $y = -6x + 50$
B $y = 6x + 50$ **D** $y = 6x - 50$
6. 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

LESSON 12-3 Problem Solving

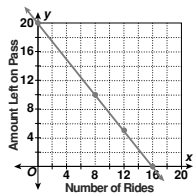
Using Slopes and Intercepts

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.

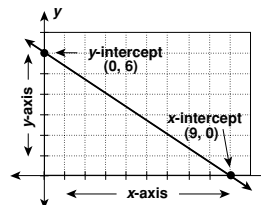
(9, 0)

- 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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