

Name _____

Graphing and Writing Equations Practice

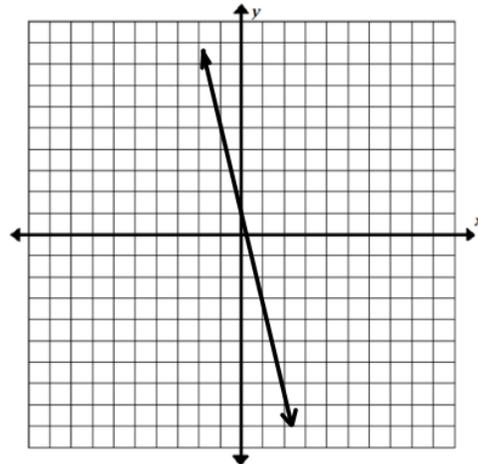
Write the letter of the correct answer on the line.

1. _____ Which equation is represented by the table of values shown below?

x	-2	-1	2	4
y	-8.5	-5	5.5	12.5

- A. $y = \frac{2}{7}x - \frac{111}{14}$
B. $y = \frac{7}{2}x - \frac{17}{2}$
C. $y = \frac{2}{7}x - \frac{33}{7}$
D. $y = \frac{7}{2}x - \frac{3}{2}$

2. _____ Which equation describes the graph shown at the right?



- A. $y = 4x + 1$
B. $y + 4x = 1$
C. $4y = x + 4$
D. $4y + x = 4$

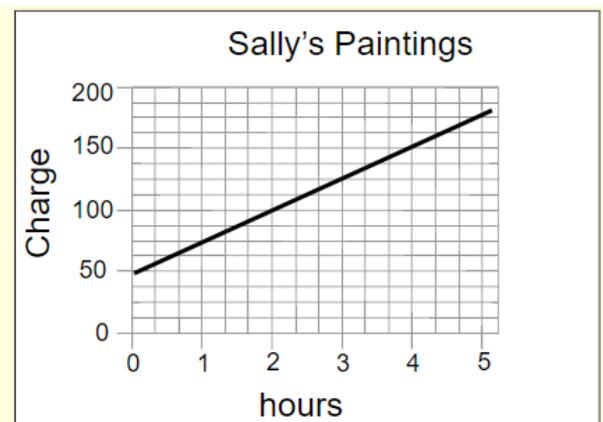
3. _____ Which of the following would be the equation for the line passing through the points (4, 5) and (-2, -3)?

- A. $y = \frac{1}{3}x + \frac{11}{3}$
B. $y = x + 1$
C. $y = \frac{4}{3}x - \frac{1}{3}$
D. $y = 4x - 11$

4. _____ What is the slope of the line represented by the equation $3y + 5x = 9$?

- A. $-\frac{3}{5}$
B. $-\frac{5}{3}$
C. $\frac{3}{5}$
D. 5

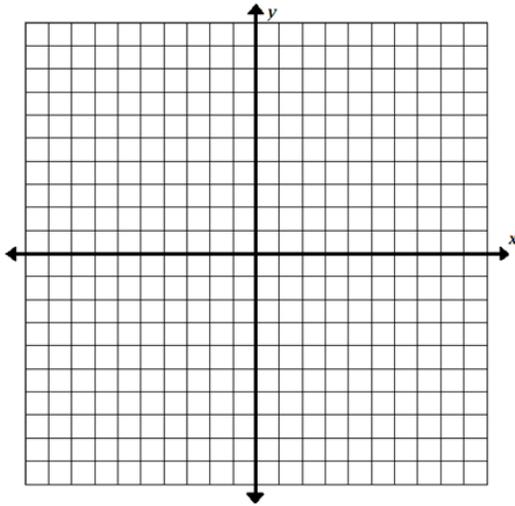
5. _____ Water from a pipe fills a tank at a constant rate. The tank contained a small amount of water before the pipe began to fill it. After 15 minutes, there are a total of 30 gallons of water in the tank. After 25 minutes, there are a total of 46 gallons in the tank. What is the rate at which the tank is being filled?
- A. 0.625 gallons per minute
 - B. 1.6 gallons per minute
 - C. 2.0 gallons per minute
 - D. 16 gallons per minute
6. _____ Snow is falling at a constant rate of 0.5 inch per hour. After 6 hours, how much snow has fallen?
- A. 0.5 inch
 - B. 3 inches
 - C. 6 inches
 - D. 12 inches
7. _____ When the dependent variable (y-value) decreases as the independent variable (x-value) increases, which statement describes the rate of change?
- A. The rate of change is positive.
 - B. The rate of change is negative.
 - C. The rate of change is zero.
 - D. The rate of change is undefined.
8. _____ Sally charges a flat fee plus a certain amount per hour to paint a house, as shown in the graph at the right. What is Sally's hourly rate?
- A. \$12.50
 - B. \$20
 - C. \$25
 - D. \$50



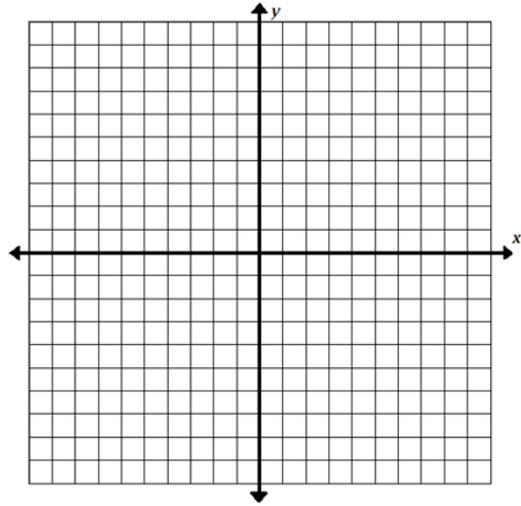
11. _____ What is the slope of the line passing through the points $(-5, 6)$ and $(-5, -6)$?
- A. Zero
B. Undefined

Graph each equation.

9. $y = \frac{5}{2}x - 3$

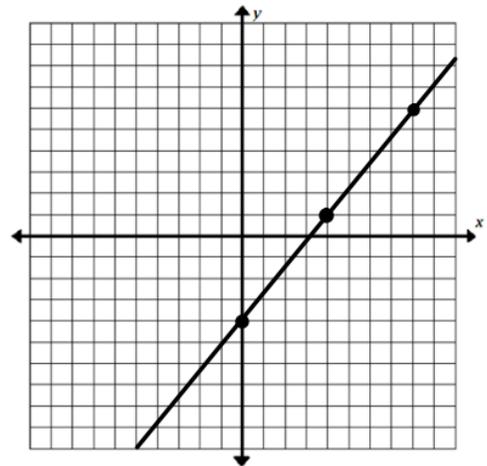


10. $3x + 5y = 20$



12. Write an equation for the line that goes through the points $(4, -10)$ and $(8, -12)$.

13. Write an equation for the line shown in the graph.



14. Jake owns a catering business. He always likes to have a certain amount of extra food on hand. When ordering chicken wings for 30 people, he orders 280 wings. For an event that has 50 people in attendance, he orders 440 wings.

a. Write 2 ordered pairs: _____

b. Define variables: $x =$ _____

$y =$ _____

c. Write an equation (in slope-intercept form) to represent the number of wings ordered based on the number of people at an event.

d. What does the slope represent in this situation?

e. Use your equation to determine the number of wings Jake would need to order for a party of 75 people.

15. Jordan charges \$45 per hour to install a door frame and uses \$16 of wood. The price (p), in dollars, he charges for a door frame that takes h hours to install is

$$p = 45h + 16$$

He charged \$106 for one door frame he installed. How many hours did he take to install it?

Graphing and Writing Equations Practice Answers

Write the letter of the correct answer on the line.

1. _____ Which equation is represented by the table of values shown below?

x	-2	-1	2	4
y	-8.5	-5	5.5	12.5

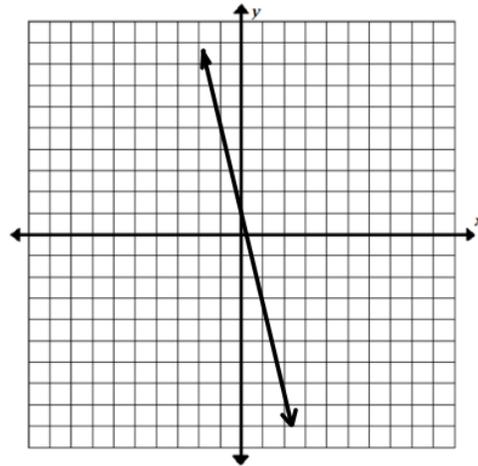
A. $y = \frac{2}{7}x - \frac{111}{14}$

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2. _____ Which equation describes the graph shown at the right?



A. $y = 4x + 1$

B. $y + 4x = 1$

C. $4y = x + 4$

D. $4y + x = 4$

3. _____ Which of the following would be the equation for the line passing through the points (4, 5) and (-2, -3)?

A. $y = \frac{1}{3}x + \frac{11}{3}$

B. $y = x + 1$

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4. _____ What is the slope of the line represented by the equation $3y + 5x = 9$?

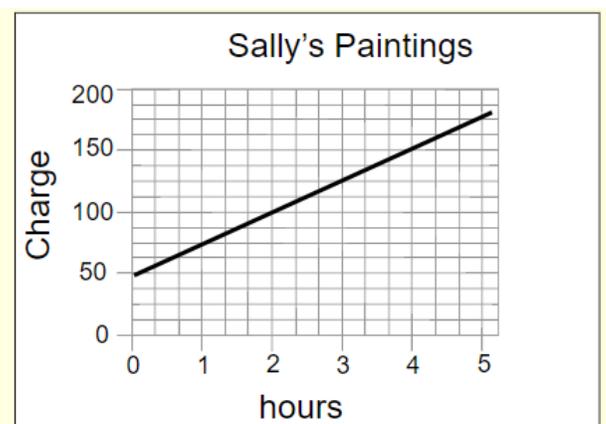
A. $-\frac{3}{5}$

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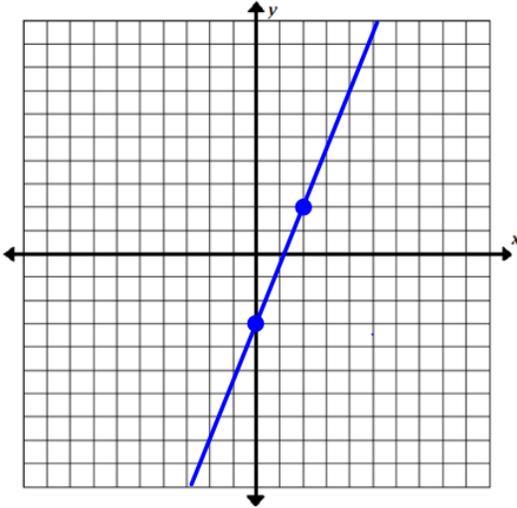
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 - B. 1.6 gallons per minute**
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- A. \$12.50
 - B. \$20
 - C. \$25**
 - D. \$50



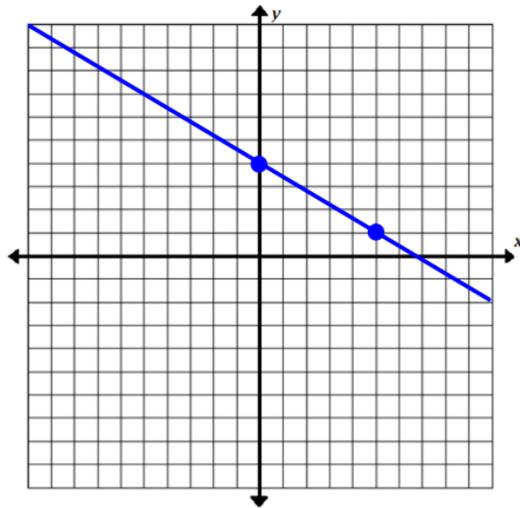
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Graph each equation.

10. $y = \frac{5}{2}x - 3$



11. $3x + 5y = 20$

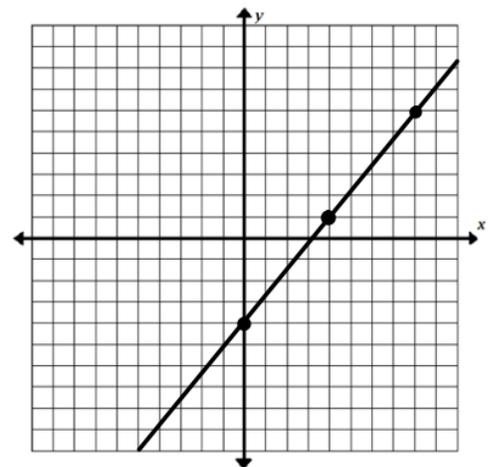


12. Write an equation for the line that goes through the points $(4, -10)$ and $(8, -12)$.

$y = -\frac{1}{2}x - 8$

13. Write an equation for the line shown in the graph.

$y = \frac{5}{4}x - 4$



14. Jake owns a catering business. He always likes to have a certain amount of extra food on hand. When ordering chicken wings for 30 people, he orders 280 wings. For an event that has 50 people in attendance, he orders 440 wings.

a. Write 2 ordered pairs: $(30, 280)$, $(50, 440)$

b. Define variables: $x =$ Number of People

$y =$ Number of Chicken Wings

c. Write an equation (in slope-intercept form) to represent the number of wings ordered based on the number of people at an event.

$$y = 8x + 40$$

d. What does the slope represent in this situation?

The number of wings per person

e. Use your equation to determine the number of wings Jake would need to order for a party of 75 people.

640 wings

15. Jordan charges \$45 per hour to install a door frame and uses \$16 of wood. The price (p), in dollars, he charges for a door frame that takes h hours to install is

$$p = 45h + 16$$

He charged \$106 for one door frame he installed. How many hours did he take to install it?

2 hours