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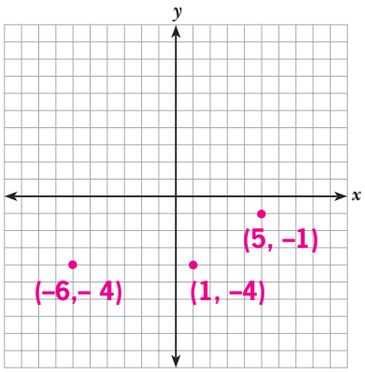
Module Test B

Module 7

Graph and label each point on the coordinate plane.



1. (5, –1)
2. (–6, –4)
3. (1, –4)

Name the quadrant in which each point lies.

4. (8, 5) I
5. (4, –9) IV

Write an ordered pair solution.

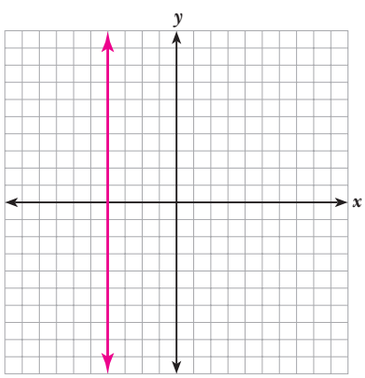
6. Find the solution to $-2x + 4y = 12$ when $y = -4$.
   (–14, –4)
7. Find the solution to $-y = -2x$ when $x = \frac{3}{4}$.
   $\left(\frac{3}{4}, \frac{3}{2}\right)$

Find three solutions to each equation.

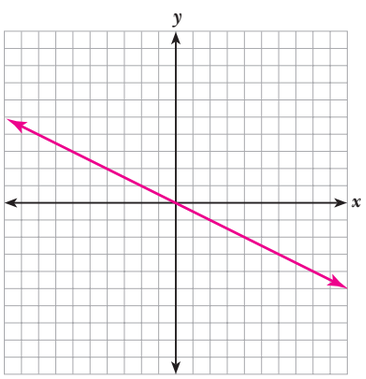
8. $x = 8$ Answers may vary.
9. $3x + y = 6$ Answers may vary.
10. $x = -\frac{y}{4}$ Answers may vary.

Graph each of the following on the coordinate plane. Points may vary but must lie on the line shown.

11. $x = -4$



12. $y = -\frac{x}{2}$



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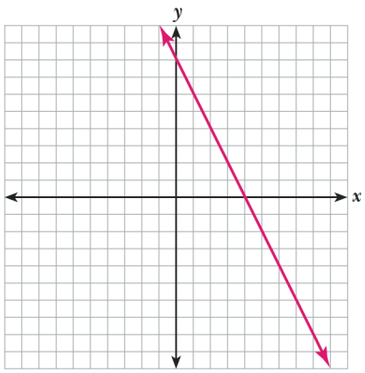
Find 3 solutions to each equation and enter them in the table.
Then, graph each equation on the coordinate plane. Answers in table may vary.

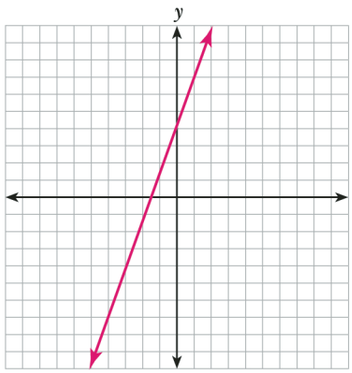
13. $y + 2x = 8$

x	y



14. $y = 3x + 4$

x	y

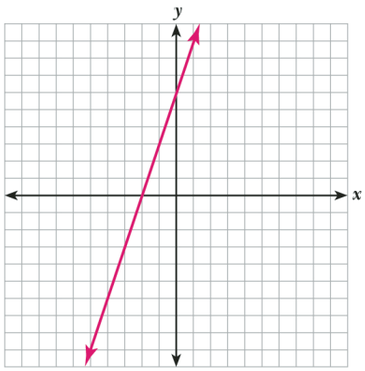


Use the intercept method to graph each equation on the coordinate plane.

15. $3x = y - 6$

x-intercept = **–2**

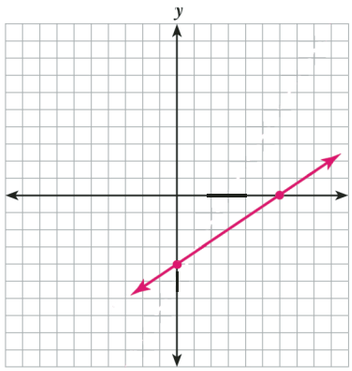
y-intercept = **6**



16. $2x - 3y = 12$

x-intercept = **6**

y-intercept = **–4**



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Find the slope of each line.

17. $y = \frac{2}{5}x + 3$

$\frac{2}{5}$

18. $y = -\frac{x}{2}$

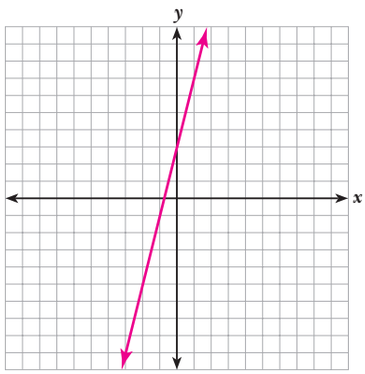
$-\frac{1}{2}$

Use the slope-intercept method to graph each equation on the coordinate plane.

19. $y = 4x + 3$

slope = 4

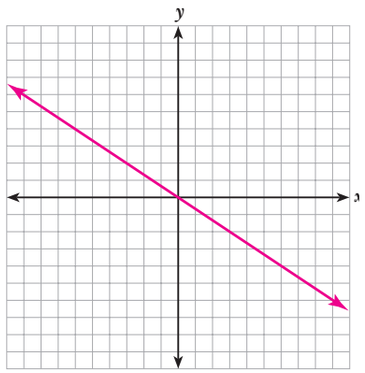
y-intercept = 3



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

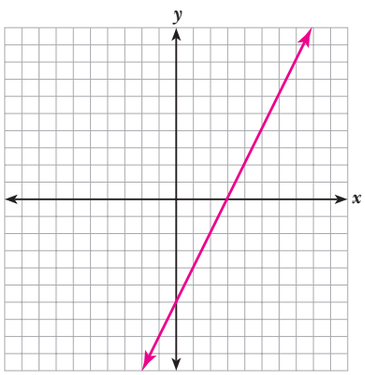
slope = $-\frac{2}{3}$

y-intercept = 0

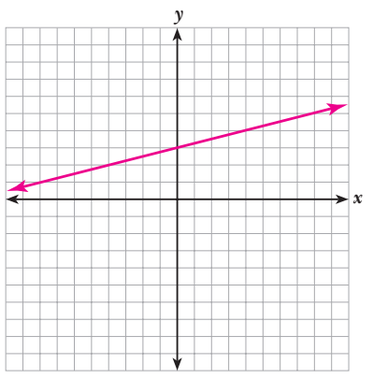


Graph each solution set on the coordinate plane.

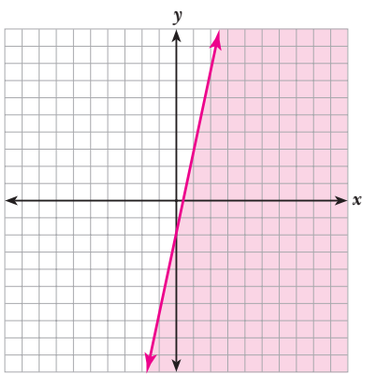
21. $2x - y = 6$



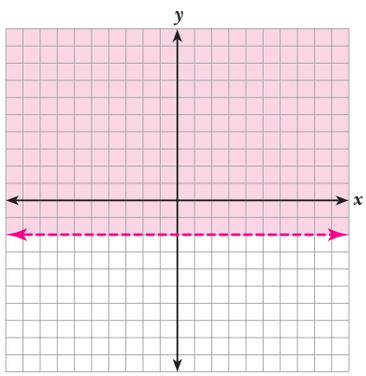
22. $y = \frac{x}{4} + 3$



23. $5x - y \geq 2$



24. $y > -2$



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Solve each of the following word problems. Show all work.

25. Tim and his friends spent $24.75 during the football game at the concession stand on soft pretzels and bottled water. A bottle of water cost $1.25, and a soft pretzel cost $3.50. If Tim and his friends bought three bottles of water, how many pretzels did they buy?

six pretzels

26. Lisa is competing in a track meet. She earns five points for each first place finish and three points for each second place finish. She needs at least 19 points to win the meet. Write an inequality to model the situation.
Variables may vary.

$5f + 3s \geq 19$

27. Ferd sponsored a dance. He charged $3 per person or $5 per couple. He made a total of $44. Find all the possible combinations of singles and couples that could have attended the dance.

13 singles and one couple

eight singles and four couples

three singles and seven couples

Circle your answer.

28. Which one of the points listed below is on the line represented by the equation $3x - 2y = 6$?

a. $\left(1, -\frac{3}{2}\right)$ **b.** (0, 2) **c.** (–2, 0) **d.** (0, 3)

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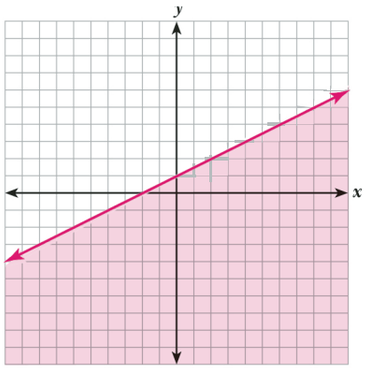
29. Which inequality represents the graph at the right?



a. $y > 2x + 1$
b. $y < 2x + 1$
c. $y > x + 1$
d. $y < x + 1$

Answer each of the following questions in the space provided. Show all work.

30. Dan is buying a car from his sister. She requires that Dan give her a $1,000 down payment. The remainder of the cost of the car is to be paid to her in 12 equal payments.

a. Write an equation to show Dan's total cost (c) if he pays (d) dollars in each payment.

$c = 12d + 1{,}000$

b. Use this equation to find the monthly payment for Dan if the cost of the car is $4,500.

$291.67

31. Explain how to graph the inequality $y \geq x + 3$.

Possible answer: Graph the boundary line $y = x + 3$. Three points on the line are (0, 3), (1, 4) and (2, 5). Draw a solid line through the three points because the inequality is greater than or equal. Pick a test point, (0, 0). Substitute $x = 0$ and $y = 0$ into the inequality $y \geq x + 3$. Because $0 \geq 0 + 3$ is false, shade points on the side of the line $y = x + 3$ that does not contain the point (0, 0).

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