1. Ann's gym charges $20 per month plus $5 per visit. Blake's gym charges $30 per month plus $3 per visit. Ann and Blake make the same number of visits per month. How many visits would make their monthly costs equal?

   A. 2

   B. 5

   C. 8

   D. 10

2. A line passes through the points (1, 4) and (5, 8). A second line passes through the points (2, 10) and (6, 4). At what point do the two lines intersect?

   A. (2, 10)

   B. (3, 6)

   C. (4, 7)

   D. (5, 8)

3. A car rental company charges $34 per day for a rented car and $0.50 for every mile driven. A second car rental company charges $20 per day and $0.75 for every mile driven. What is the number of miles at which both companies charge the same amount for a one-day rental?

   A. 56 miles

   B. 54 miles

C. 36 miles

D. 24 miles

4. Line K is represented by the equation $y = 2x + 2$. Line T goes through the points ($^-$3, 3) and (6, 12). What is the point of intersection for lines K and T?

   A. (1, 4)

   B. (2, 6)

   C. (3, 8)

   D. (4, 10)

5. Line J goes through the points (6, 7) and ($^-$2, $^-$5). Line K is represented by the equation $y = ^-\frac{1}{2}x + 2$. What is the point of intersection between lines J and K?
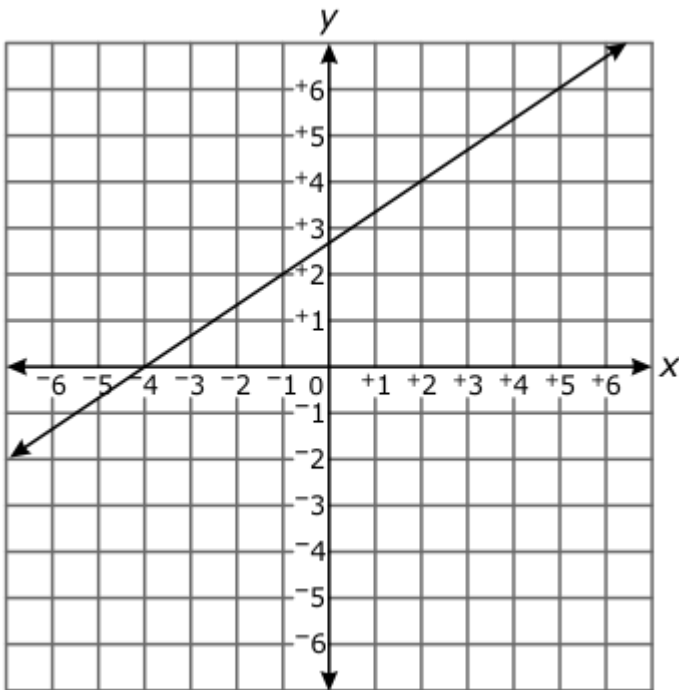
   A. (0, $^-$2)

   B. (1, 2)

   C. (2, 1)

   D. (4, 0)

6. Line P goes through the points ($^-$5, $^-$8) and (2, 13). Line Q is represented by the equation $y = ^-2x - 8$. What is the point of intersection of lines P and Q?

A. (⁻5, 2)

B. (⁻3, ⁻2)

C. (1, ⁻10)

D. (2, ⁻12)

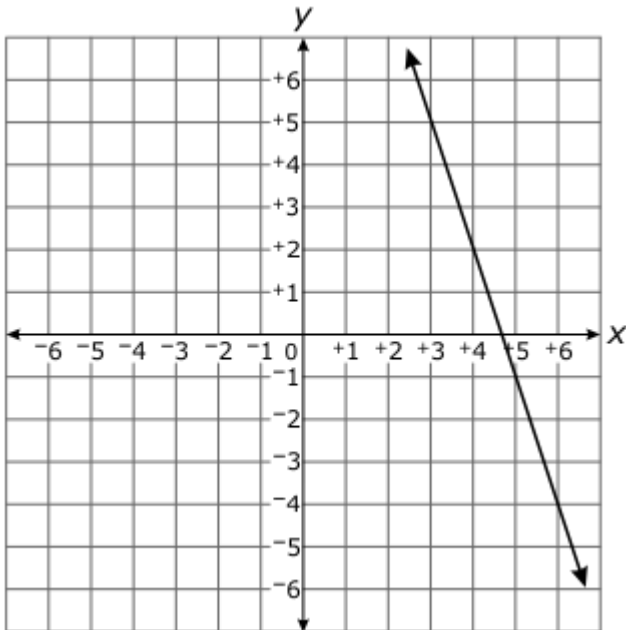**7.** Line *H* is graphed below. Line *J* passes through the points (⁻6, ⁻1) and (6, 5).

If line *J* is graphed on the same coordinate plane as line *H*, what is the point of intersection of the two lines?

A. (⁻6, ⁻1)

B. (⁻4, 0)

C. (0, 2)

D. (4, 4)

8. The graph of a line is shown below.

What is the *x*-coordinate of the point at which the line graphed above intersects the line $y = 1.25x - 3$?

A. 2

B. 3

C. 4

D. 5

9. Line *Z* is represented by the equation $y = {}^-6x + 4$. Line *Q* passes through the points ($^-1$, $^-8$) and (2, 10). What is the point of intersection of lines *Z* and *Q*?
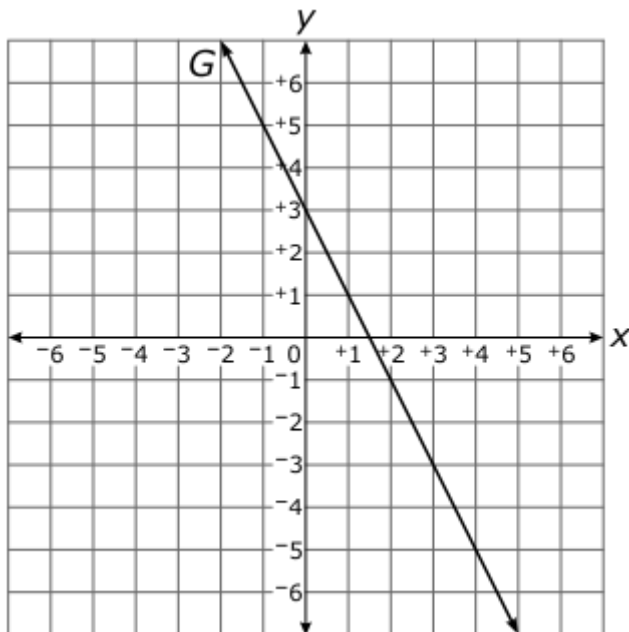
A. $\left(\frac{1}{2}, \quad 1\right)$

B. $\left(-\frac{1}{2}, \quad 7\right)$

C. no solution

D. infinite solutions

10. Line F is represented by the equation $y = 2x + 1$. Line G is shown on the graph below.

If line F is graphed on the same coordinate plane as line G, at what point would the two lines intersect?

A. $(^-2, ^-3)$

B. $\left(\frac{1}{2}, 2\right)$

C. (1, 3)

D. $\left(2, \frac{1}{2}\right)$

11. A system of equations is shown below.

$$y = 5x + 10$$
$$y = 10x - 5$$

 What is the value of
 $x + y$
 ?

A. 25

B. 28

C. 72

D. 75

12. Line *f* goes through the points (8, 1) and (⁻1, 7). Line *g* goes through the points (1, 3) and (⁻2, 3). What is the point of intersection of lines *f* and *g*?

A. (3, 5)

B. (3, 7)

C. (5, 3)

D. (7, 3)

13. Line *m* is represented by the equation $y = \frac{1}{2}x - 5$. Line *n* goes through the points (0, 4) and (¯3, 4). What is the point of intersection of lines *m* and *n*?

A. (4, ¯3)

B. (4, ¯4)

C. (18, 3)

D. (18, 4)

14. A system of equations is shown below.

$$y = -\frac{1}{2}x - 6$$
$$y = 3x + 1$$
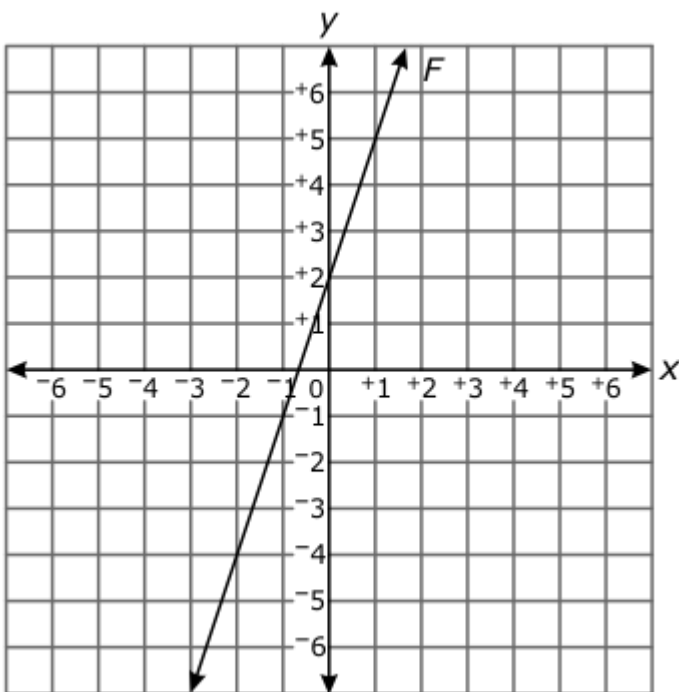
What is the value of
x
in the solution to the system?

A. 5

B. 2

C. ⁻2

D. ⁻5

15. Line *F* is graphed below. Line *E*, represented by the equation $y = {}^{-}2x - 3$, will be graphed below.

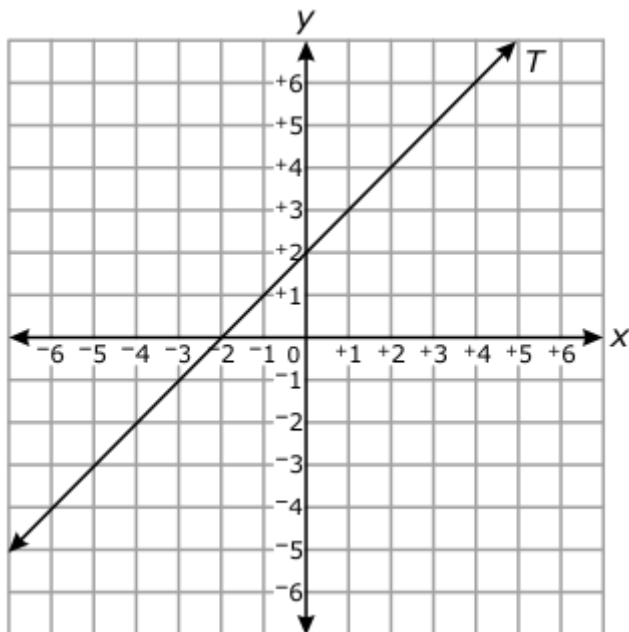What will be the point of intersection for line *E* and line *F*?

A. (⁻1, 1)

B. (⁻1, ⁻1)

C. (⁻2, ⁻4)

D. (⁻4, ⁻2)

16. Line *T* is graphed below.

Which equation intersects line *T* at the point (1, 3)?

A. $y = {}^-2x + 4$

B. $y = {}^-x + 4$

C. $y = x + 4$

D. $y = 2x + 4$

17. A system of equations is shown below.

$$y = 2x - 4$$
$$y = \frac{3}{4}x + 2$$

What is the value of
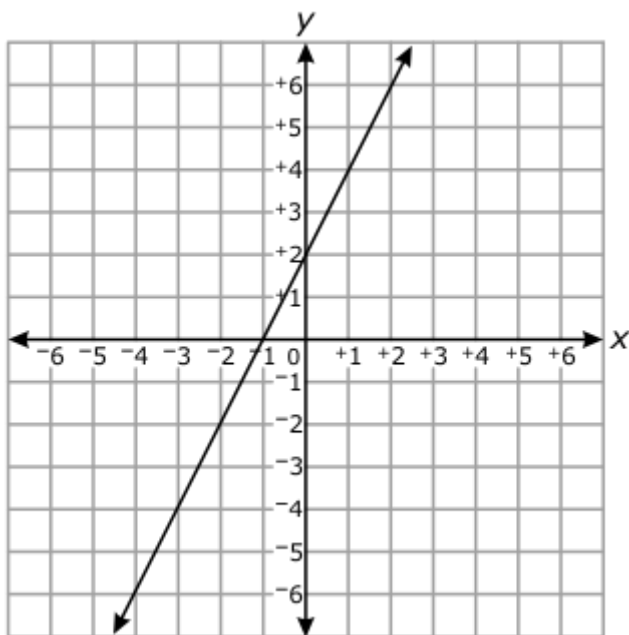*x*
in the solution to the system?

A. 5.6

B. 4.8

C. ⁻4.8

D. ⁻5.6

18. Line *t* is graphed below.

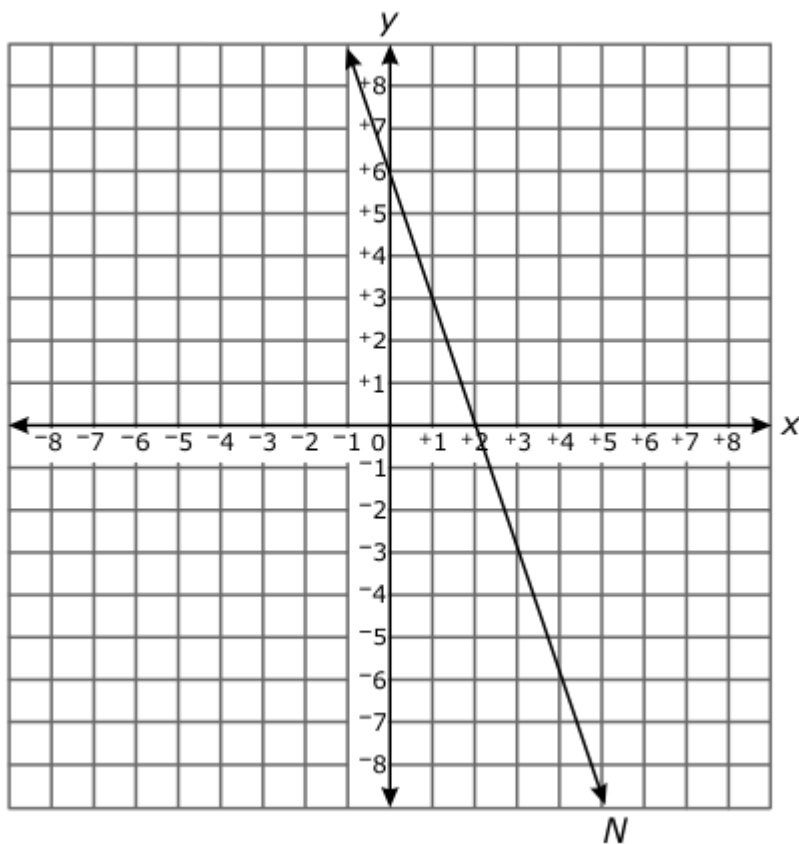Line *s* goes through the points (⁻5, 0) and (1, 6). What is the point of intersection of lines *t* and *s*?

A. (0, 2)

B. (1, 4)

C. (3, 8)

D. (5, 10)

19. Line *N* is graphed below. Line *M*, represented by the equation $y = 3x + 6$, will be graphed below.

What will be the point of intersection for lines *M* and *N*?

A. (0, 6)

B. (1, 3)

C. (2, 0)

D. (3, ⁻3)

20. Line S goes through the points (⁻3, 1) and (2, 6). Line T goes through the points (0, ⁻3) and (⁻2, ⁻7). What is the point of intersection of line S and line T?

    A. (1, ⁻5)

    B. (2, 3)

    C. (6, 10)

    D. (7, 11)

21. Line E is represented by the equation $y = 2x + 3$. Line F goes through the points (⁻3, 2) and (3, 8). What is the point of intersection of lines E and F?
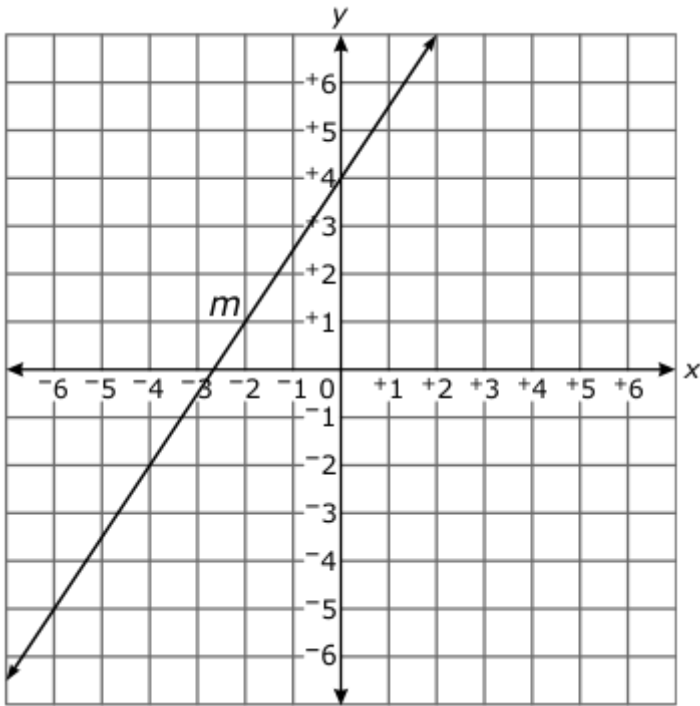
    A. (⁻1, 1)

    B. (0, 3)

    C. (1, 5)

    D. (2, 7)

22. Line m is graphed below.

Line *n* is represented by the equation $y = {}^-1.5x - 2$. What is the *y*-value of the point of intersection for the two lines?

A. $^-2$

B. $^-1$

C. 1

D. 2

23. Line *k* goes through the points ($^-5$, 3) and ($^-2$, 1). Line *m* goes through the points (0, $^-3$) and (2, 1). What is the point of intersection of lines *k* and *m*?

A. ($^-1$, 1)

B. (1, $^-1$)

C. (1, 0)

D. (2, 1)

24. Line K passes through the points ($^-$2, 10) and (4, $^-$2). The equation for line M is $y = 4x + 3$. What is the point of intersection for lines K and M?

A. (0.5, 4)

B. (0.5, 5)

C. (1, 4)

D. (1, 5)

25. Line p passes through points (4, 5) and ($^-$4, $^-$1). Line v passes through points ($^-$2, 5) and (2, $^-$1). What is the point of intersection of lines p and v?
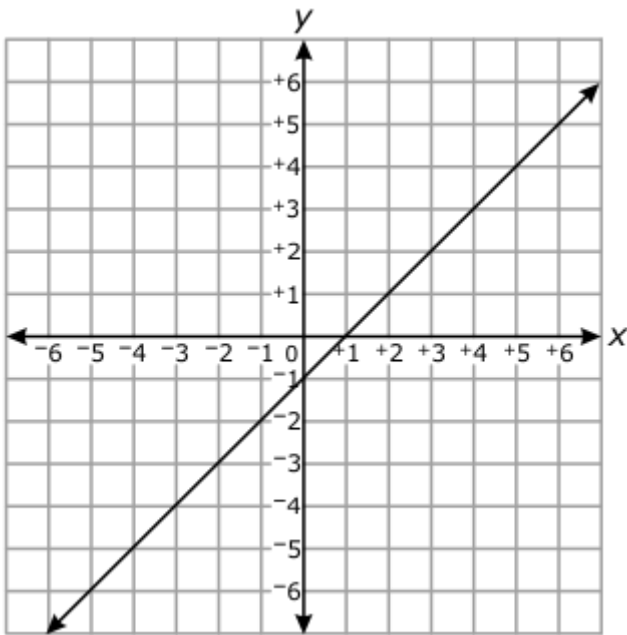
A. (2, 0)

B. (0, 2)

C. (0, $^-$2)
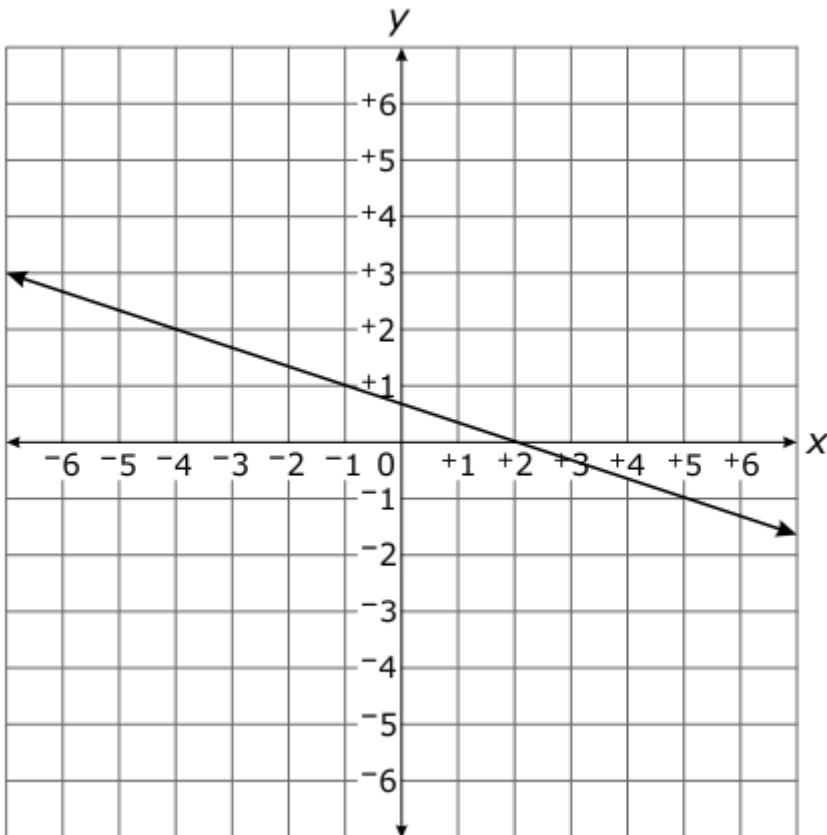
D. ($^-$2, 0)

26. Line N is represented by the equation $y = ^-\frac{1}{2}x + 5$. Line M is graphed below.

If line *N* is graphed on the same coordinate grid as line *M*, what will be the point of intersection?

A. (2, 1)

B. (2, 3)

C. (3, 2)

D. (4, 3)

27. Line *N* is represented by the equation $y = \frac{1}{2}x + 4$. Line *M* is graphed below.

If line *N* is graphed on the same coordinate plane as line *M*, at what point will the two lines intersect?

A. (⁻4, 2)

B. (⁻2, 3)

C. (⁻1, 1)

D. (0, 4)

28. A system of equations is shown below.

$$y = 3x - 2$$
$$y = 4x - 5$$

What is the

x

-value in the solution to the system?

A. 3

B. 5

C. 7

D. 10

29. A system of equations is shown below.

$$y = {}^-2x + 1$$
$$y = 4x + 7$$

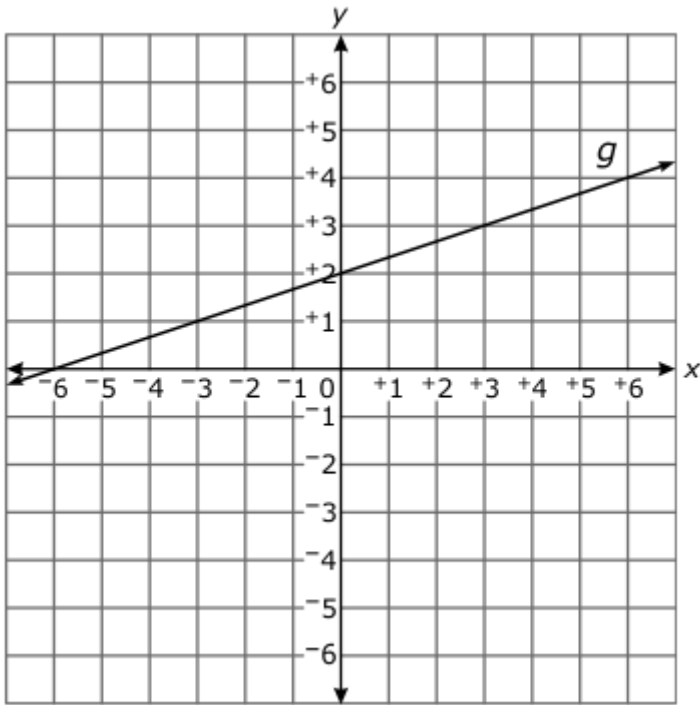What is the value of
x
 +
y
 in the solution to the system?

A. $^-4$

B. $^-2$

C. $^-1$

D. 2

30. Line *g* is graphed below. Line *h*, represented by the equation $y = 3x + 10$, will be graphed below.

What will be the point of intersection of lines *g* and *h*?

A. ($^-$6, 0)
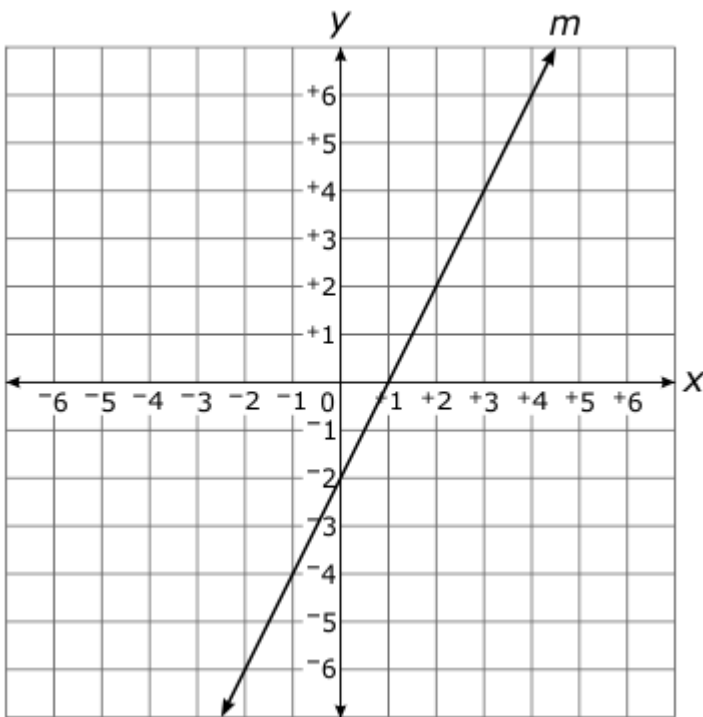
B. ($^-$3, 1)

C. (0, 2)

D. (3, 3)

31. Line *Z* passes through the points ($^-$1, 4) and (1, 12). The equation for line *W* is $y = 2x - 6$. What is the point of intersection for lines *Z* and *W*?

A. (0, $^-$6)

B. (0, 8)

C. ($^-$6, $^-$18)

D. ($^-$7, $^-$20)

32. Line *n* passes through the points (1, $^-$4) and (4, 8). Line *m* is shown on the graph below.

If line *n* is graphed on the same coordinate plane as line *m*, what is the point of intersection of lines *m* and *n*?
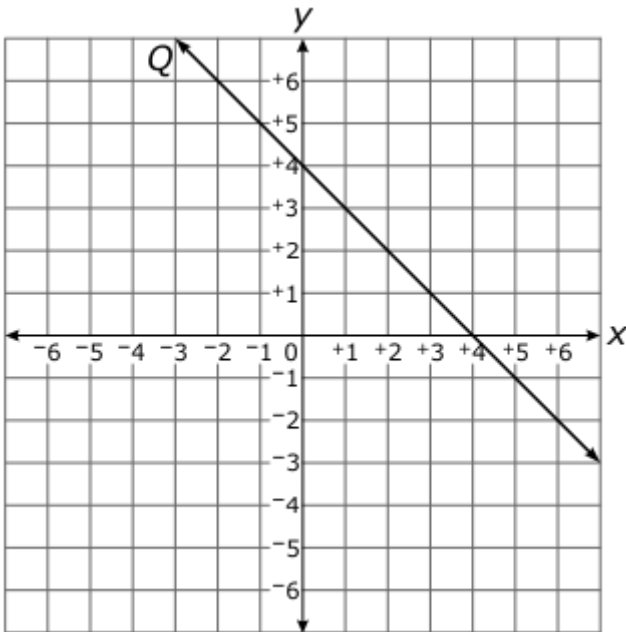
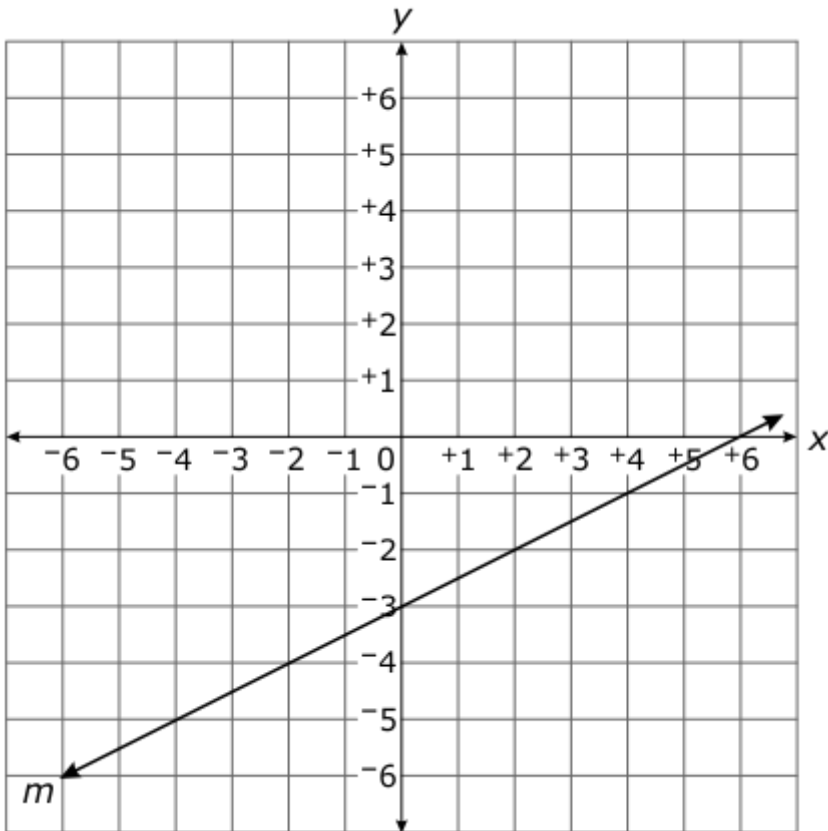**A.** (2, 0)

B. (2, 2)

C. (3, 4)

D. (4, 3)

33. Line Q is graphed below.

 Line R passes through the points (3, 5) and ($^{-}$1, 1). What is the point of intersection of lines Q and R?

A. (0, 4)

B. (1, 3)
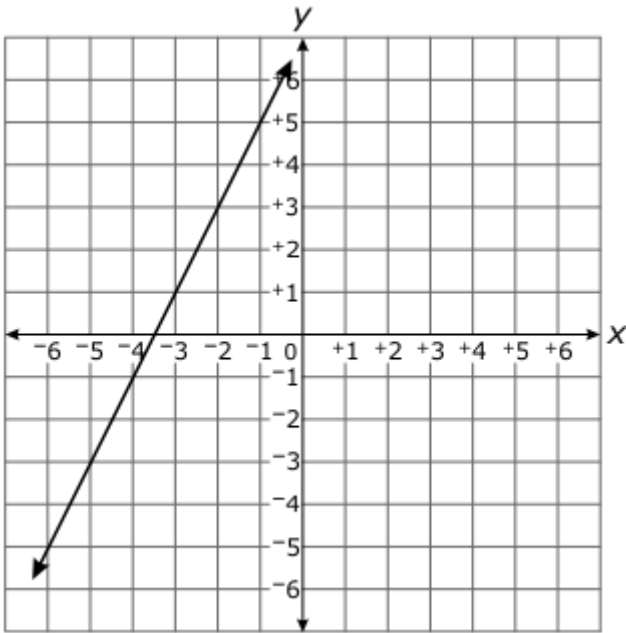
C. (2, 2)

D. (3, 1)

34. Line m is graphed below.

Which equation, when graphed, will intersect line *m* at (4, ⁻1)?

A. $y = 2x - 9$

B. $y = 2x - 6$
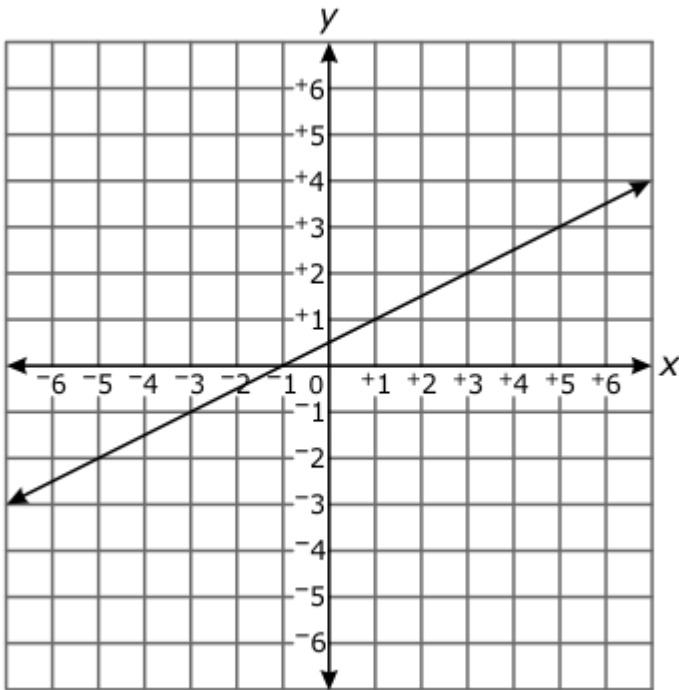
C. $y = 2x + 5$

D. $y = 2x + 6$

35. Line *h* is graphed below. The equation of line *k* is $y = \frac{2}{3}x - 1$.

What is the point of intersection of the two lines?

A. (⁻6, ⁻5)

B. (⁻5, ⁻6)

C. (⁻4, ⁻1)

D. (⁻2, 3)

36. A line is graphed below.

If a line represented by the equation $y = 0.25x - 1$ were graphed on the same coordinate plane, what would be the point of intersection?

A. ($^-$6, $^-$2.5)

B. ($^-$6, $^-$1.5)

C. ($^-$2, $^-$1.5)

D. ($^-$2, $^-$0.5)

37. Which statement is true about the system of equations shown below?

$$y = 6x + 4$$
$$y = 2(3x + 2)$$

A. The solution is $\left(-\frac{2}{3}, 0\right)$.

B. The solution is $(0, 0)$.

C. There is no solution.

D. There are infinite solutions.

38. A system of equations is shown below.

$$y = 3x + 4$$

$$y = 5x + 3$$

Using the solution to the system, what is the value of

$$\frac{y}{x}$$

?

A. 2

B. 3

C. 5

D. 6

39. A system of equations is shown below.

$$y = {}^{-}20x - 20$$

$$y = {}^{-}10x + 40$$

What is the value of
y
in the solution to the system?

A. 20

B. 40

C. 60

D. 100

40. A system of equations is shown below.

$$y = {}^{-}2x + 1$$

$$y = {}^{-}x - 2$$

What is the solution to the system?

A. (3, ⁻5)

B. (1, ⁻1)

C. (⁻1, 3)

D. (⁻3, 7)

41. James paid an initial fee of $6.00 for a movie rental service. Each time he rents a movie he is charged $2.00. Sarah uses a different movie rental service that charges based on the equation $y = 3x + 4$, where y is the total cost and x is the number of movies rented. At what point are the prices of the two services the same?

A. (0.6, 0.6)

B. (0.6, 6)

C. (2, 10)

D. (10, 2)

42. A system of equations is shown below.

$$y = \frac{1}{3}x + \frac{11}{6}$$
$$y = -\frac{1}{2}x + \frac{3}{2}$$

What is the value of
x
that makes the system of equations true?

A. $x = {}^-2$

B. $x = {}^-0.4$

C. $x = 1.7$

D. $x = 2$

43. What is the solution to the system of equations below?

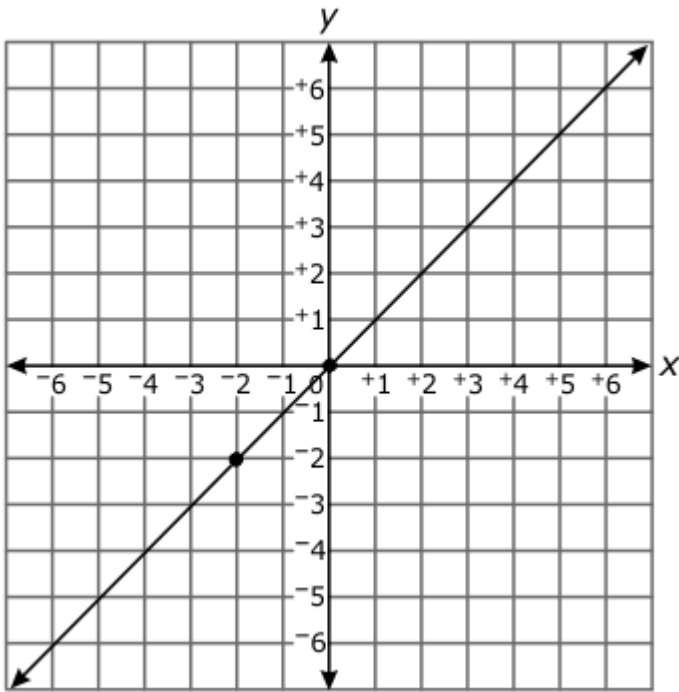$$y = 2x - 1$$
$$y = \frac{1}{3}x + 4$$

A. (2, 3)

B. (2, 4)

C. (3, 2)

D. (3, 5)

44. A line is graphed below.

Which equation would intersect the line on the graph at the point (⁻2, ⁻2)?

A. $y = 3x + 4$

B. $y = 2x - 6$

C. $y = {}^-x + 4$

D. $y = {}^-3x - 4$

45. Line *w* goes through the points (1, 3) and (⁻2, ⁻3). Line *z* goes through the points (⁻4, 0) and (2, ⁻2). What is the point of intersection of lines *w* and *z*?
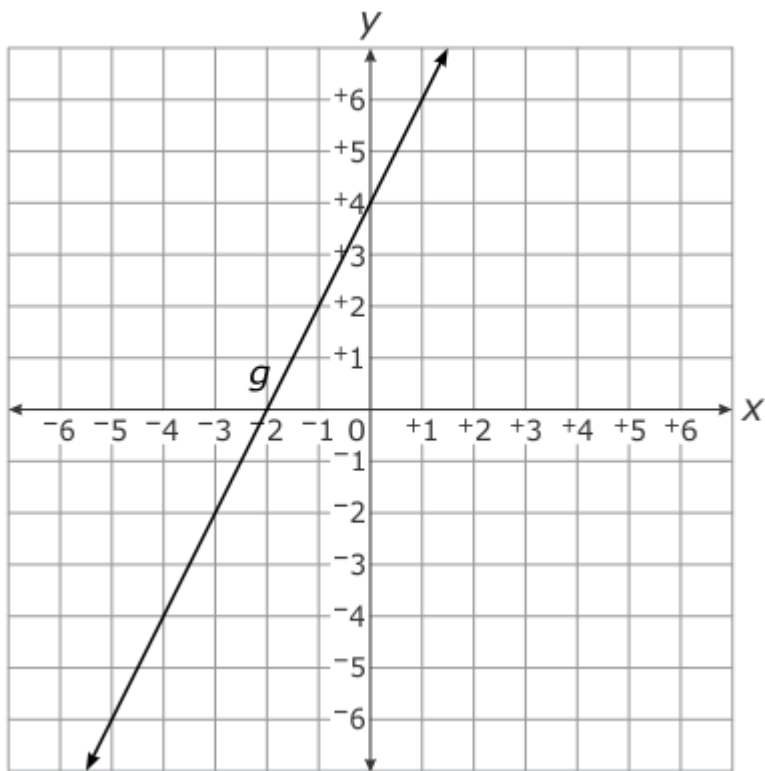
A. (0, 1)

B. (0, ⁻1)

C. (⁻1, ⁻1)

D. (⁻2, ⁻1)

46. Line *g* is on the graph below. Line *h*, represented by the equation $y = \frac{2}{3}x$, will be graphed below.

What will be the point of intersection of lines
g
and
h
?

A. (⁻3, ⁻2)

B. (⁻2, ⁻3)

C. (2, ⁻3)

D. (3, ⁻2)

47. Line *s* goes through the points (⁻2, ⁻6) and (4, 2). Line *t* goes through the points (⁻2, 4) and (4, ⁻8). What is the point of intersection of lines *s* and *t*?

A. (2, ⁻1)

B. (1, ⁻2)

C. (⁻1, 2)

D. (⁻2, 1)

48. A system of equations is shown below.

$$y = 2x - 1$$
$$y = 3x - 5$$

What is the
y
-value in the solution to the system?

A. ⁻13

B. ⁻6

C. 4

D. 7

49. A system of equations is shown below.

$$y = 2x + 1$$
$$y = x + 2$$

What is the solution to the system?

A. (0, 1)

B. (1, 2)

C. (1, 3)

D. (2, 4)

50. A system of equations is shown below.

$$y = {}^-4$$
$$y = x + 4$$

What is the solution to the system?

A. (⁻8, ⁻4)

B. (8, 4)

C. (⁻4, 0)

D. (⁻4, ⁻4)

51. A system of equations is shown below.

$$y = 2x \quad y = \frac{1}{2}x - 3$$

What is the
x
-value in the solution to the system?

A. ⁻4

B. ⁻3

C. ⁻2

D. ⁻1

52. A system of equations is shown below.

$$y = 4x$$
$$y = x - 6$$

What is the

x-
value in the solution to the system?

A. ⁻8

B. ⁻2

C. 2

D. 8

53. Line *j* goes through the points (⁻1, 2) and (2, ⁻1). Line *k* goes through the points (5, 2) and (4, 0). What is the point of intersection for line *j* and line *k*?
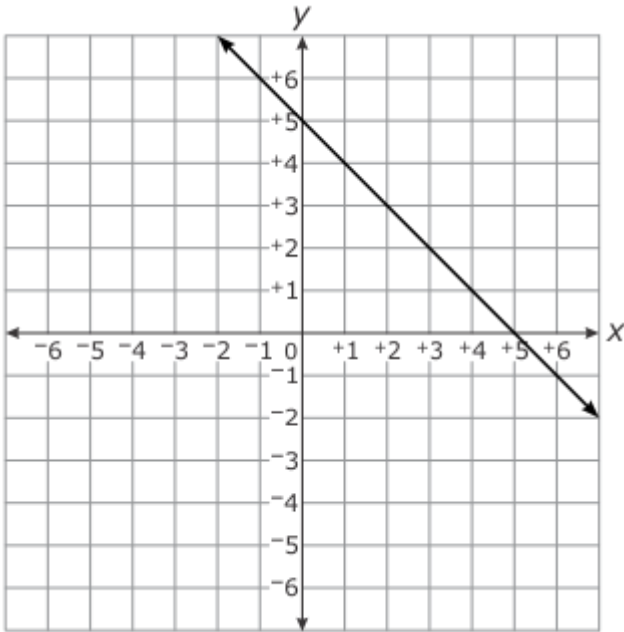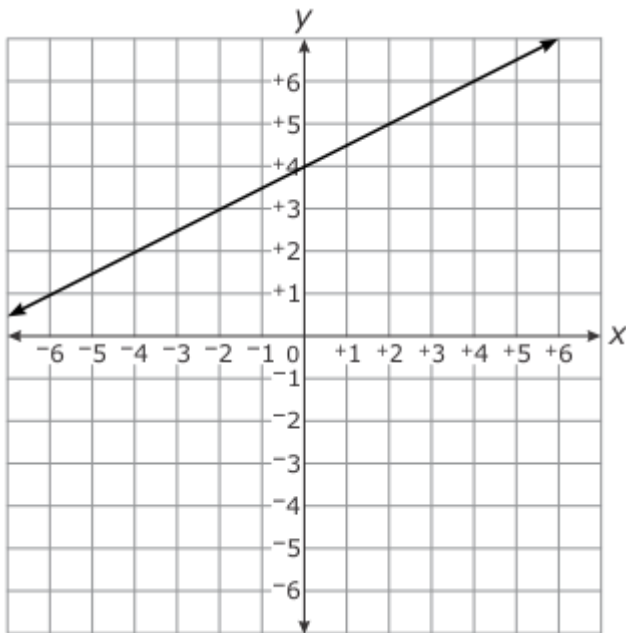
A. (2, ⁻1)

B. (3, ⁻2)

C. (4, 0)

D. (6, ⁻5)

54. Which ordered pair would be the point of intersection of the graph below and *y* = *x* + 1?

A. (0, 5)

B. (1, 4)

C. (2, 3)

D. (3, 4)

55. The line of the equation $y = {}^-4x - 5$ will be graphed on the coordinate plane, intersecting the line below.

What will be the point of intersection of the two lines?

A. (0, 4)

B. (0, ⁻5)

C. (⁻2, 3)

D. (3, ⁻2)

56. A system of equations is shown below.

$$y = -\frac{9}{10}x + 10\frac{1}{2}$$
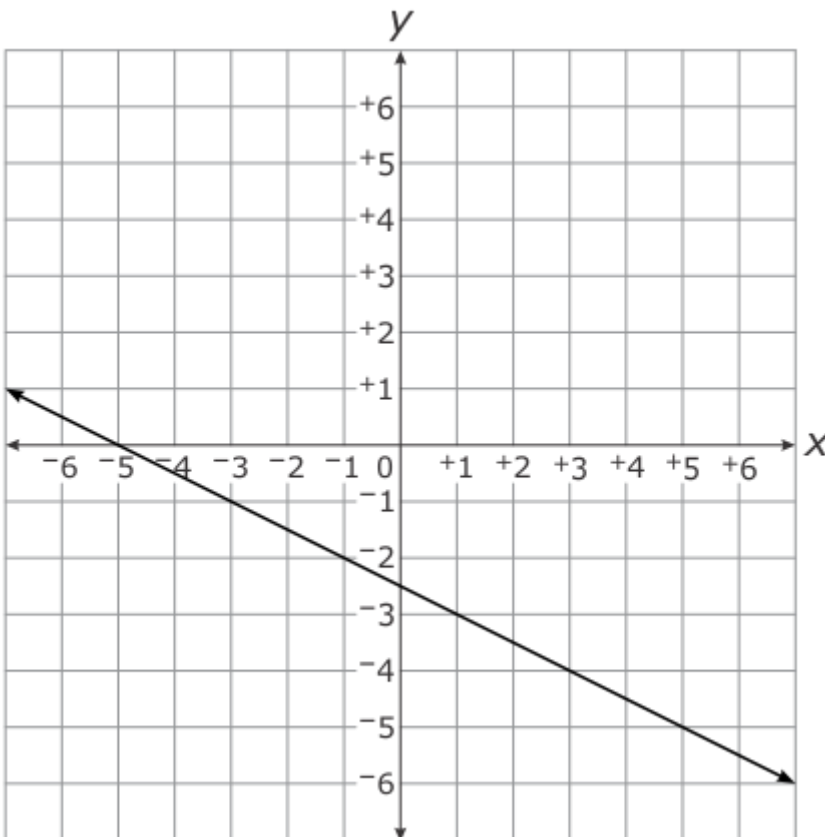$$y = 2x - 4$$

What is the solution to the system?

A. (2, 3)

B. (3, 2)

C. (5, 6)

D. (6, 5)

57. Which equation intersects the line graphed below when $x = 1$?

A. $y = {}^-x - 4$

B. $y = {}^-x + 4$

C. $y = x - 4$

D. $y = x + 4$

58. Line p passes through the points (⁻4, ⁻2) and (0, 0). Line r passes through the points (⁻1, ⁻8) and (2, ⁻2). What is the point of intersection of lines p and r?

A. (1, 4)

B. (3, 0)

C. (3, 1)

D. (4, 2)

59. A system of equations is shown below.

$$y = \frac{3}{4}x - 7$$
$$y = \frac{1}{2}x - 5$$

What is the solution to the system of equations?

A. (⁻11, ⁻3)

B. (⁻1, 8)

C. (6, ⁻2)

D. (8, ⁻1)

60. A system of equations is shown below.

$$y = 3x - 6$$
$$y = 2x + 2$$

What is the solution to the system of equations?
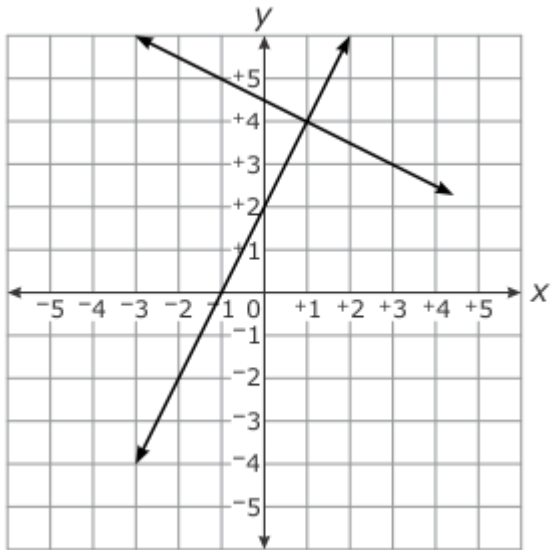
A. (⁻8, ⁻14)
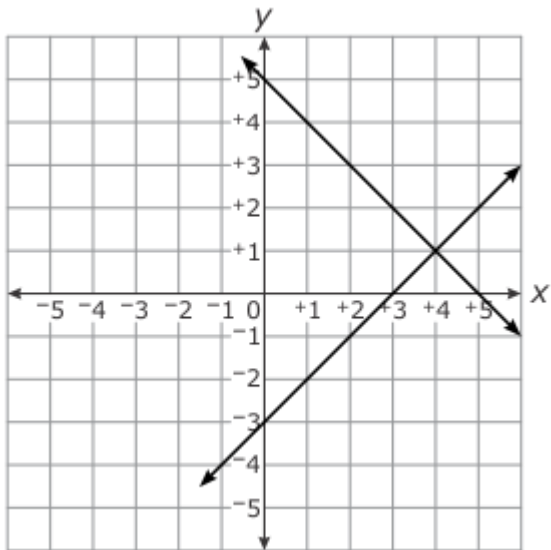
B. (⁻4, ⁻6)

C. (4, 6)

D. (8, 18)

61. Which graph shows a system of equations that has a solution of (4, 1)?
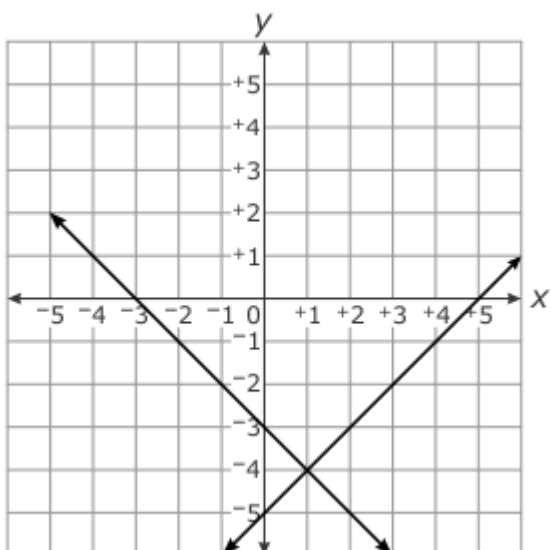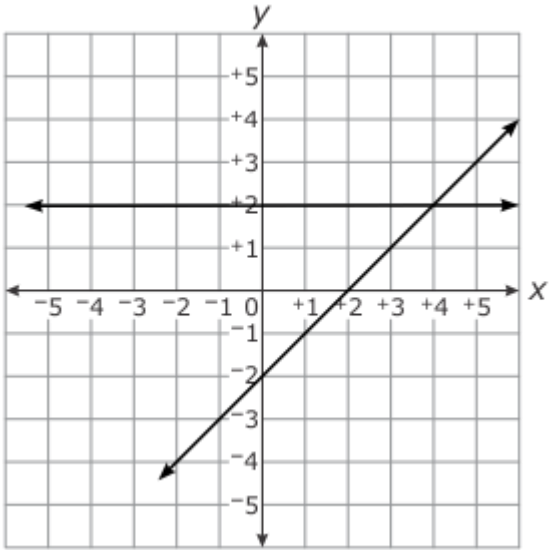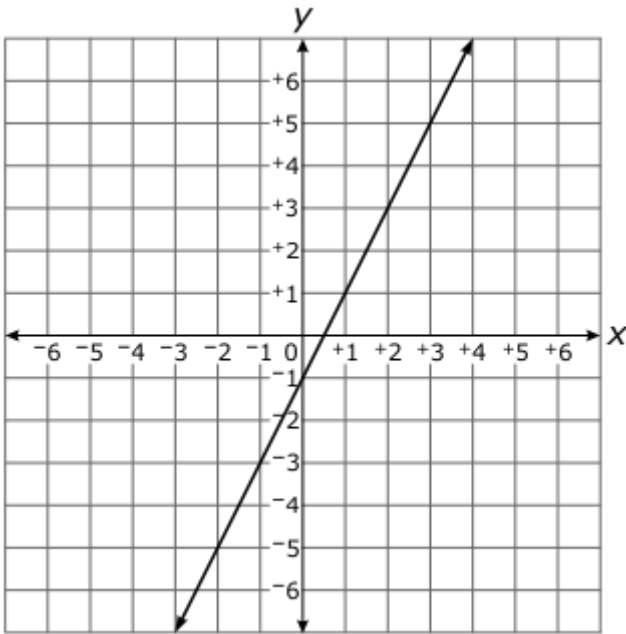
A.

B.

C.

D.

62. Line *F* goes through the points (0, 6) and (6, ⁻3). Line *G* is graphed below.

 If line *F* is graphed on the same coordinate plane as line *G*, at what point will the two lines intersect?
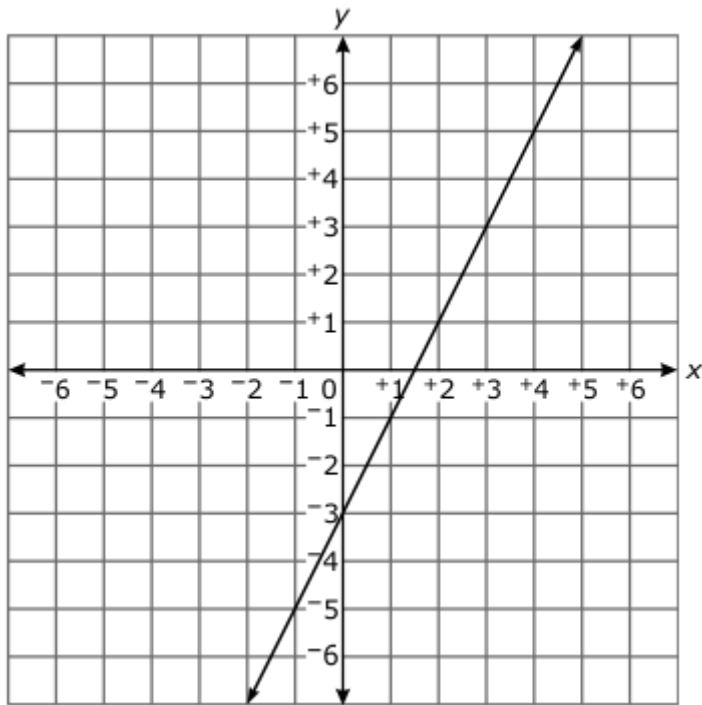
A. (1, 2)

B. (2, 1)

C. (2, 3)

D. (3, 2)

63. A line is graphed below.

If a line that goes through the points (4, ⁻5) and (7, ⁻14) is graphed above, at what point will the two lines intersect?

A. (⁻2, ⁻7)

B. (0, ⁻3)

C. (1, ⁻1)

D. (2, 1)

64. Line *s* is represented by the equation $y = {}^{-}x + 3$. Line *t* goes through the points (5, 1) and (3, ⁻3). What is the point of intersection for lines *s* and *t*?

A. (0, 3)

B. (3, ⁻3)

C. (4, ⁻1)

D. (3, 0)

65. A system of equations is shown below.

$$y = \frac{1}{2}x + 11$$
$$y = \frac{3}{4}x + 13$$

What is the solution to the system of equations?

A. (⁻8, 7)

B. (⁻2, 10)

C. (4, 16)

D. (8, 15)

66. A system of equations is shown below.

$$y = -\frac{5}{3}x + 6y = \frac{1}{3}x + 4$$

What is the

x

-value of the solution to the system of equations?

A. $-9\frac{1}{3}$

B. $^-1$

C. 1

D. $9\frac{1}{3}$

67. A system of equations is shown below.

$$y = \frac{2}{3}x \quad - \quad 6y = \frac{2}{3}x + 12$$

What is the solution to the system of equations?

A. infinite solutions

B. no solution

C. (6, $^-$9)

D. ($^-$9, 6)

68. The tickets to a high school hockey game cost either $6 or $11. A total of 450 tickets, worth $3,950, were sold. How much of the $3,950 was made from selling the $6 tickets?

A. $2,750

B. $1,200

C. $250

D. $200

69. What is the y-value of the solution to the system of equations shown below?

$$x + 2y = -3$$
$$5x + y = 12$$

A. -3

B. $-\dfrac{3}{11}$

C. $\dfrac{21}{11}$

D. 3

70. If the system of equations represented by $ax + by = c$ and $px + qy = r$ has no solution, what must be true of these equations?

A. $a \neq p, b \neq q, c \neq r$

B. $a \neq p, b \neq q, c = r$

C. $a = p, b = q, c \neq r$

D. $a = p, b = q, c = r$

71. Which statement is **correct** for the pair of linear equations shown below?

$y = 2x + 1$
$y - 5 = 2x + 1$

A.
The equations intersect at $\left(6, \dfrac{5}{2}\right)$ because y is equal to $y - 5$.

B. The equations intersect at $y = 0$ or 5 because y is equal to $y - 5$.

C. The equations represent the same line because $2x + 1$ is always equal to $2x + 1$.

D. The equations represent parallel lines because $2x + 1$ cannot be equal to both y and $y - 5$.