Form

Practice Final 3

3rd try!

Directions: For each of the following questions, decide which of the choices is best and fill in the corresponding space on the answer document.

1. What is the solution(s) for 1⁄2X = 6 ?
   A. 3 only
   B. 3 or –3
   C. 12 only
   D. 12 or –12
   ItemID: DD.1000327

2. What is the solution(s) for $|8x| = 24$?
   A. 3 only
   B. –3 only
   C. 3 or –3
   D. no solution
   ItemID: DD.1000328

3. What is the solution set for the absolute value of
   |5*x*| = –30?
   A. {–6}
   B. {6}
   C. {–6, 6}
   D. { }
   ItemID: DD.1000329

4. What is the solution set for |–6*x*| = 15?
   A. $\left\{2\frac{1}{2}\right\}$
   B. $\left\{-2\frac{1}{2}\right\}$
   C. $\left\{2\frac{1}{2}, -2\frac{1}{2}\right\}$
   D. {0}
   ItemID: DD.1000330

5. Which of the following is the equivalent to $|2x| = 12$?
   A. $x = 6$
   B. $x = -6$
   C. $x = 6$ or $x = -6$
   D. $x = 0$ or $x = 6$
   ItemID: DD.1000332

6. What is the solution of $|4x| > -20$?
   A. no solution
   B. all numbers greater than –5
   C. all numbers between –5 and 5
   D. all numbers
   ItemID: DD.1000333

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7. Which of the following is equivalent to $|2x| > 10$?

   A. $x > 5$

   B. $x < -5$

   C. $x > 5$ and $x < -5$

   D. $x > 5$ or $x < -5$

   ItemID: DD.1000334

8. Solve $7|x - 6| = 49$.

   A. $x = 55$

   B. $x = 13$

   C. $x = 55$ or $x = -43$

   D. $x = 13$ or $x = -1$

   ItemID: DD-HOLT.1036084

9. Solve $|6x - 9| + 5 = 2$.

   A. $x = 1$

   B. $x = \frac{11}{6}$

   C. No solution

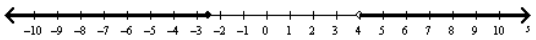
   D. $x = \frac{8}{3}$

   ItemID: DD-HOLT.1036085

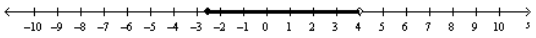
10. Solve and graph the compound inequality.

    $s + 4 < 1.5$ OR $3 + s \geq 7$

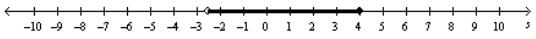
    A. $s < -2.5$ OR $s \geq 4$

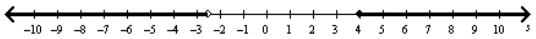
    B. $s < -2.5$ OR $s < 4$

    C. $s < -2.5$ OR $s < 4$

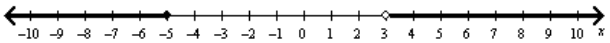
    

    D. $s < -2.5$ OR $s \geq 4$

    ItemID: DD-HOLT.1036112

11. Write the compound inequality shown by the graph.

    A. $x \leq -5$ AND $x > 3$

    B. $x \leq 3$ AND $x > -5$

    C. $x \leq -5$ OR $x > 3$

    D. $x < -5$ OR $x > 3$

    ItemID: DD-HOLT.1036113

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12. Which of the following is a solution of $x - 6 < 6$ AND $x + 4 \geq -1$?

A. 2

B. 14

C. 12

D. –6

ItemID: DD-HOLT.1036114

13. LaDainian tried solving an equation.

On which step did his first error occur?
$3(6x - 4) - 2(5x + 1) = 22$

Step 1: $18x - 12 - 2(5x + 1) = 22$
Step 2: $18x - 12 - 10x + 2 = 22$
Step 3: $8x - 14 = 22$
Step 4: $8x = 8$
Step 5: $x = 1$

A. Step 1

B. Step 2

C. Step 3

D. Step 4

ItemID: DD.1000345

14. Which of the following is a correct next step in solving
$5(7x - 3) - 2(x + 1) = 17$?

A. $35x - 3 - 2x + 1 = 17$

B. $35x - 3 - 2x - 1 = 17$

C. $35x - 15 - 2x - 2 = 17$

D. $35x - 15 - 2x + 2 = 17$

ItemID: DD.1000346

15. Heather solved the following equation as shown. What is the justification for step 3?
$5(2x - 3) - 10 = 45$
Step 1: $10x - 15 - 10 = 45$
Step 2: $10x - 25 = 45$
Step 3: $10x - 25 + 25 = 45 + 25$
Step 4: $10x = 70$
Step 5: $x = 7$

A. closure property of addition

B. distributive property

C. additive inverse property

D. addition property of equality

ItemID: DD.1000347

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16. Roberto solved the following equation as shown. On which step did he apply the commutative property of addition as justification?

$8 + 5 (x – 3) = 23$

Step 1: $8 + 5x – 15 = 23$
Step 2: $5x + 8 – 15 = 23$
Step 3: $5x – 7 = 23$
Step 4: $5x = 30$
Step 5: $x = 6$

A. Step 1
B. Step 2
C. Step 3
D. Step 4

ItemID: DD.1000348

17. What is n if twice n decreased by 31 is 59?

A. 90
B. 45
C. 28
D. 14

ItemID: DD.1000349

18. The sum of two numbers is 101 and their difference is 27. What is the lesser number?

A. 17
B. 27
C. 37
D. 47

ItemID: DD.1000350

19. A rectangle is 10 inches longer than it is wide. If the perimeter is 148 inches, which equation could be used to find the width, w, of the rectangle in inches?

A. $4w = 148$
B. $w + (w + 10) = 148$
C. $2w + (2w + 10) = 148$
D. $2w + 2(w + 10) = 148$

ItemID: DD.1000351

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20. A tank contains 520 gallons of water. A smaller tank holds 316 gallons of water. The larger tank is draining into the smaller tank at 4 gallons per hour. If t is the number of hours until both tanks have the same number of gallons of water, which equation could solve this problem?

A. $316 - t = 520 + t$

B. $316 + t = 520 - t$

C. $316 - 4t = 520 + 4t$

D. $316 + 4t = 520 - 4t$

ItemID: DD.1000353

21. The length of a rectangular field is 24 feet longer than the width. The length and width are whole numbers. What is the greatest possible width if the perimeter is less than 210 feet?

A. 32

B. 40

C. 41

D. 52

ItemID: DD.1000354

22. Eight times a whole number, n, decreased by 16 is at least 73. What is the minimum value of n?

A. 8

B. 10

C. 11

D. 12

ItemID: DD.1000355

23. Belinda has saved $420. She needs at least $660 for college books next year. Which inequality expresses how many weeks, w, it will take her if she saves $15 per week?

A. $420 + 15w \leq 660$

B. $420 + 15w = 660$

C. $420 + 15w > 660$

D. $420 + 15w \geq 660$

ItemID: DD.1000358

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24. The Sanchez family had dinner at their favorite restaurant. A 9 % sales tax was added to their bill. Amy paid the bill with a $ 10 gift certificate plus $ 30.60 . How much did the family´s dinner cost before tax? Round your answer to the nearest penny.

A. $ 43.25

B. $ 37.25

C. $ 35.95

D. $ 36.95

ItemID: DD-HOLT.1036063

25. A video store charges a monthly membership fee of $7.50, but the charge to rent each movie is only $1.00 per movie. Another store has no membership fee, but it costs $2.50 to rent each movie. How many movies need to be rented each month for the total fees to be the same from either company?

A. 3 movies

B. 5 movies

C. 7 movies

D. 9 movies

ItemID: DD-HOLT.1036068

26. Find three consecutive integers such that twice the greatest integer is 2 less than 3 times the least integer.

A. 2 , 3 , 4

B. 4 , 5 , 6

C. 6 , 7 , 8

D. 8 , 9 , 10

ItemID: DD-HOLT.1036069

27. What is the greatest possible integer solution of the inequality $2.847x < 15.168$?

A. 5.33

B. 4

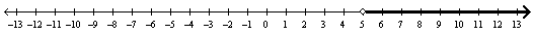
C. 6

D. 5

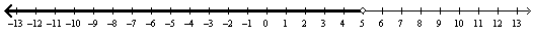
ItemID: DD-HOLT.1036101

28. Solve and graph $6x < 3x + 15$.

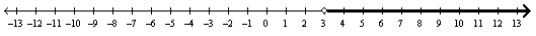
A. $x > 5$



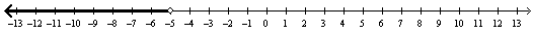
B. $x < 5$



C. $x > 3$



D. $x < –5$



ItemID: DD-HOLT.1036105

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29. Mrs. Williams is deciding between two field trips for her class. The Science Center charges $ 135 plus $ 3 per student. The Dino Discovery Museum simply charges $ 6 per student. For how many students will the Science Center charge less than the Dino Discovery Museum?

A. 132 or more students

B. 132 or fewer students

C. More than 45 students

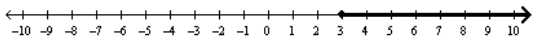
D. Fewer than 45 students

ItemID: DD-HOLT.1036106

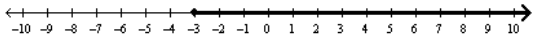
30. Solve the inequality and graph the solution.

$-3x + 2.5x \leq 1.5(x + 4)$

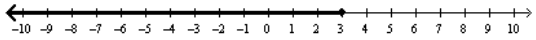
A. $x \geq 3$



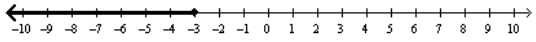
B. $x \geq -3$



C. $x \leq 3$



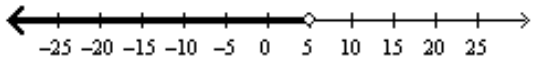
D. $x \leq -3$



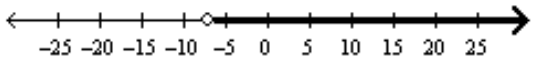
ItemID: DD-HOLT.1036107

31. Solve $-2(m-8) > -2$. Justify each step. Then graph the solution set on a number line.

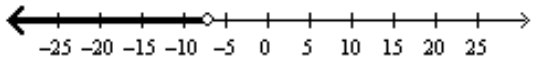
A. $m < 5$



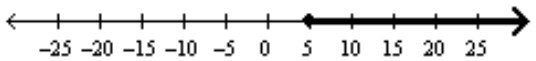
B. $m > -7$



C. $m < -7$



D. $m > 5$



ItemID: DD-HOLT.1037244

32. Juan needs to take a taxi to get to the movies. The taxi charges $ 3.50 for the first mile, and then $ 2.75 for each mile after that. If the total charge is $18.63 , then how far was Juan ´s taxi ride to the movie?

A. 6.5 miles

B. 5.3 miles

C. 6.8 miles

D. 5.5 miles

ItemID: DD-HOLT.1039723

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33. An amusement park has two types of season passes. Plan 1 charges a one-time fee of $ 175.00 for admission plus $ 8.00 every trip for parking. Plan 2 charges a one-time fee of $ 125.00 for parking plus $ 13.00 every trip for admission. For what number of trips is the cost of these plans the same?

A. 6 trips

B. 10 trips

C. 3 trips

D. 21 trips

ItemID: DD-HOLT.1039727

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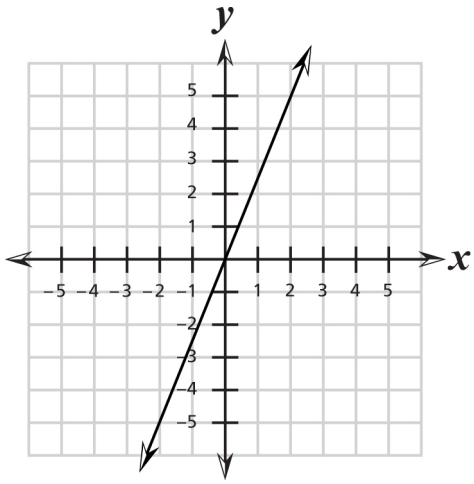
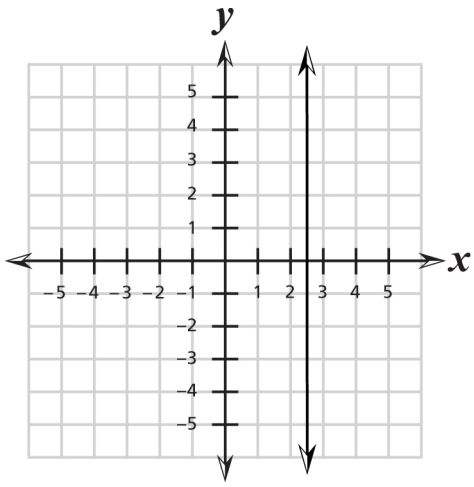
34. Which graph represents $y = \frac{5}{2}x$?

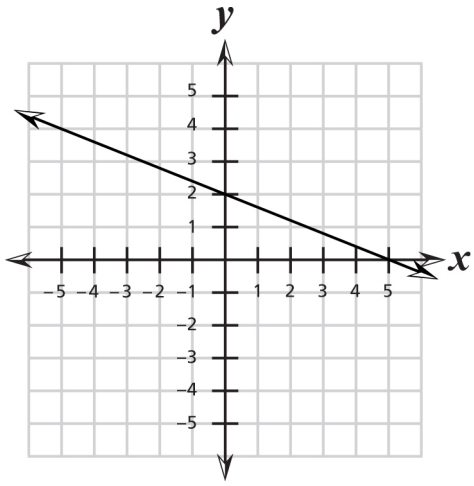
A.



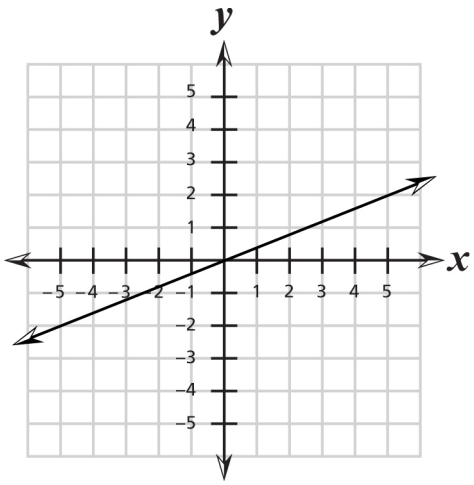
B.



C.



D.



ItemID: DD.1000297

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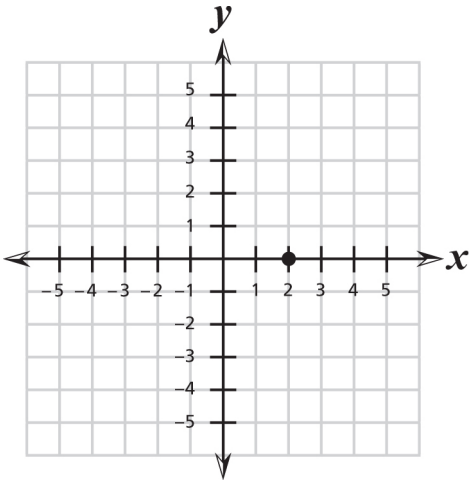
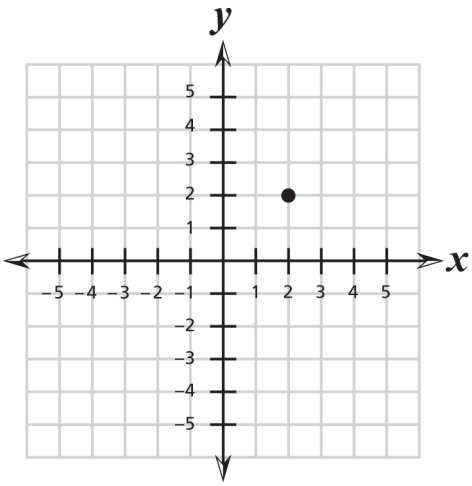
35. Which graph represents all the points that satisfy $x = 2$?

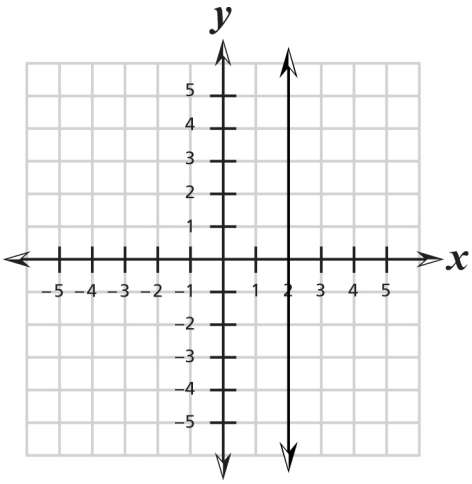
A.



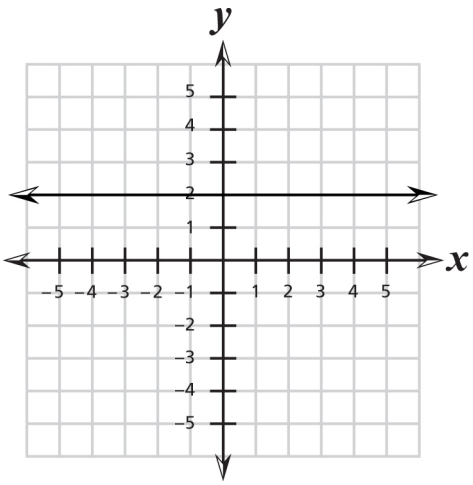
B.



C.



D.



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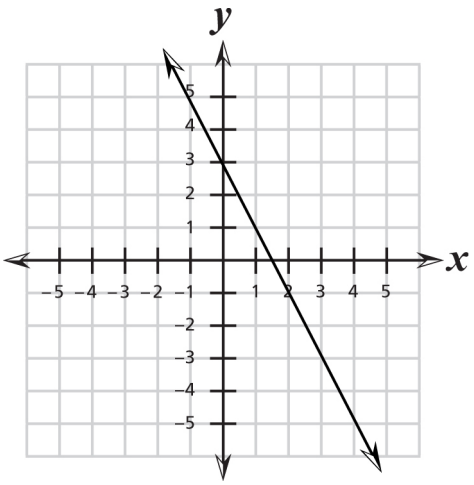
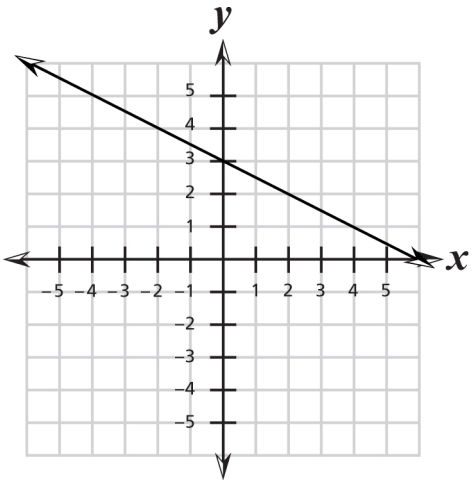
36. Which of the following is the graph of $y = -\frac{1}{2}x + 3$?

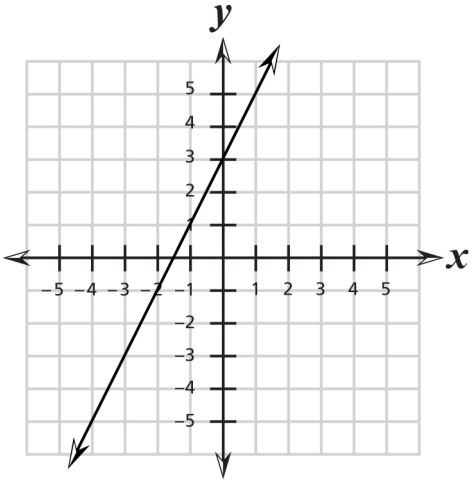
A.



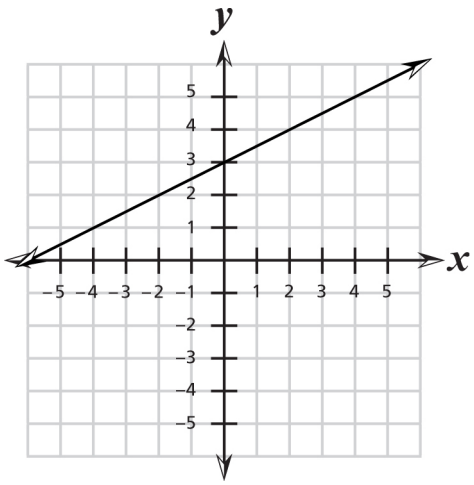
B.



C.



D.



ItemID: DD.1000299

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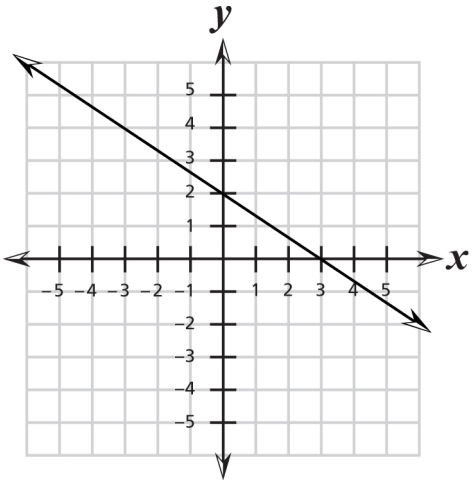
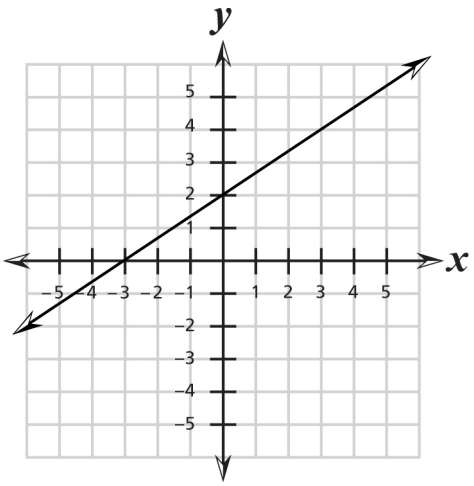
37. Which of the following is the graph of $2x–3y=6$?

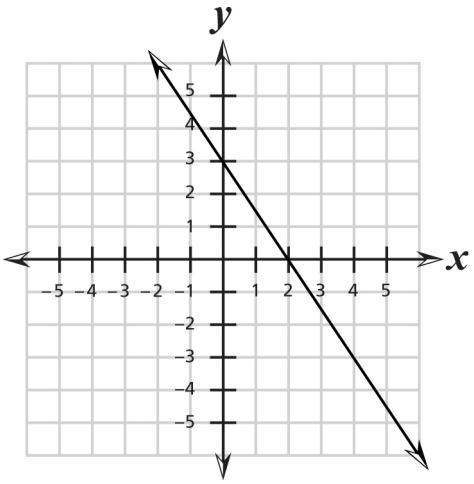
A.



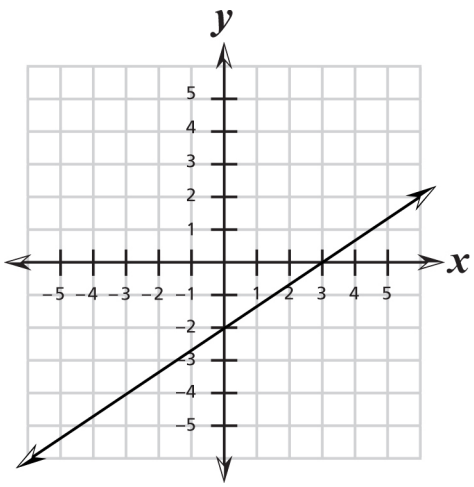
B.



C.



D.



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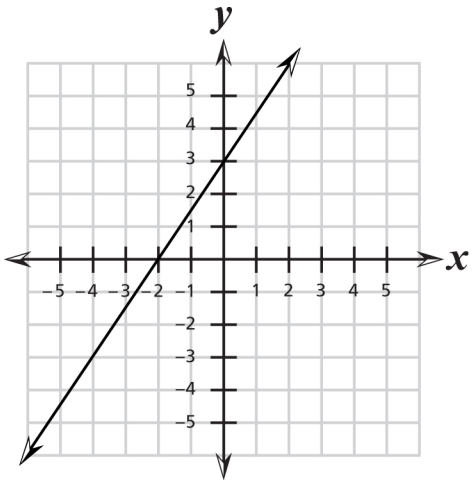
38. What is the sum of the x- and y-intercepts shown?



A. 5

B. 1

C. –5

D. –6

ItemID: DD.1000303

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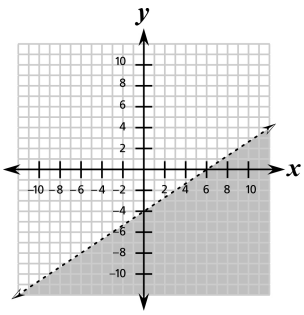
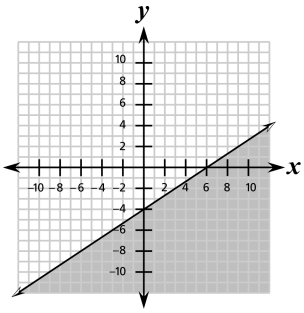
39. Which of the following is the graph of

$2x - 3y \geq 12$?

A.



B.



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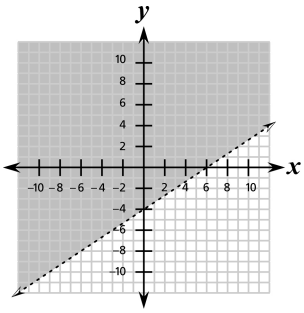

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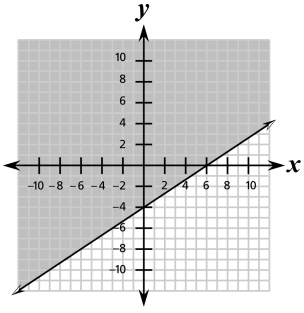

ItemID: DD.1000304

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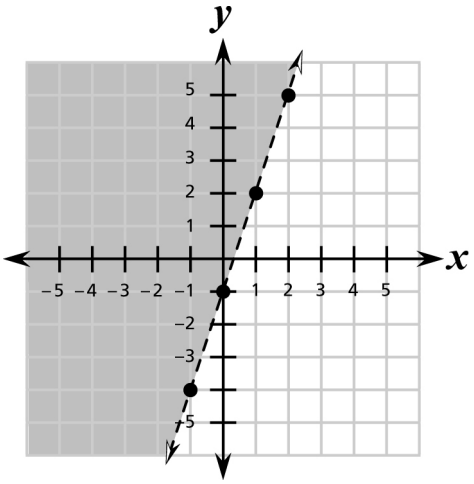
40. Which of the following is the graph of $y > 3x - 1$?

A.



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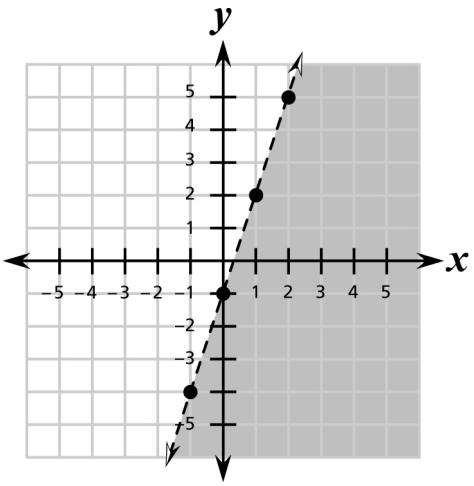
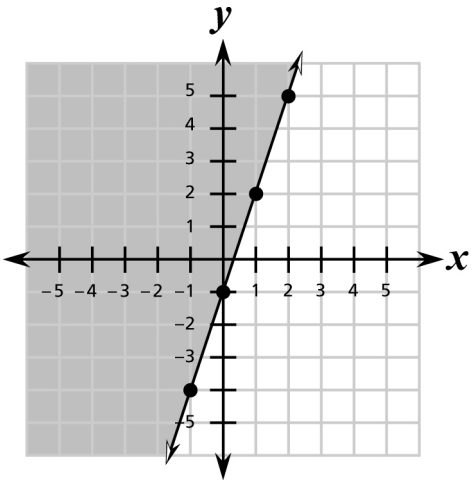
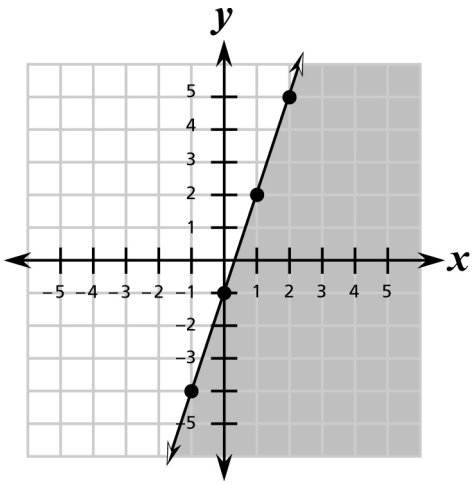


C.



D.



ItemID: DD.1000305

41. What are the *x*- and *y*-intercepts of the line defined by $2x - 3y = 12$?

A. *x*-int = 6, *y*-int = –4

B. *x*-int = -4, *y*-int = 6

C. *x*-int = 2, *y*-int = –3

D. *x*-int = 6, *y*-int = 4

ItemID: DD.1000362

42. What is the *y*-intercept of the graph of $y = \frac{2}{3}x - \frac{1}{2}$?

A. $\frac{2}{3}$

B. $\frac{1}{2}$

C. $-\frac{1}{2}$

D. –2

ItemID: DD.1000367

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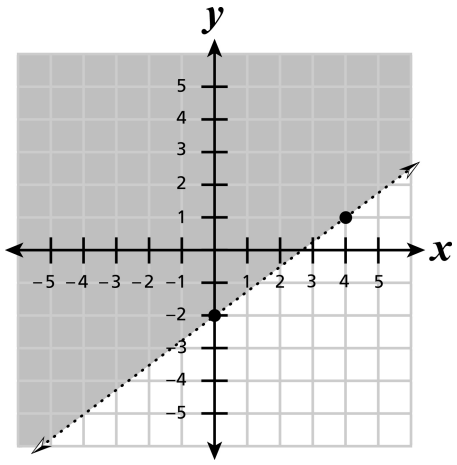
43. What is the inequality for this graph?



A. $y > \frac{4}{3}x - 2$

B. $y > \frac{3}{4}x - 2$

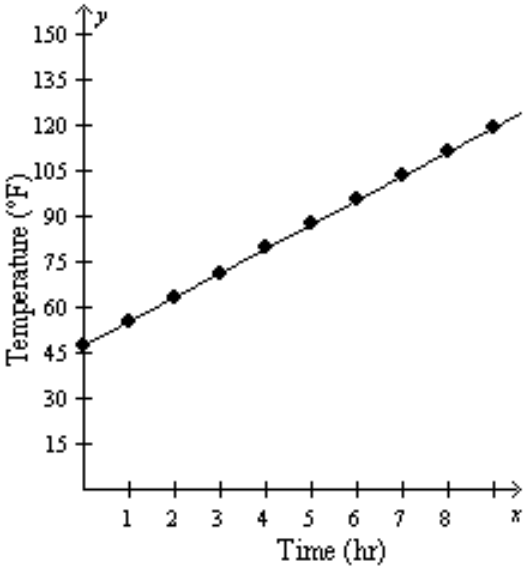
C. $y < \frac{4}{3}x - 2$

D. $y < \frac{3}{4}x - 2$

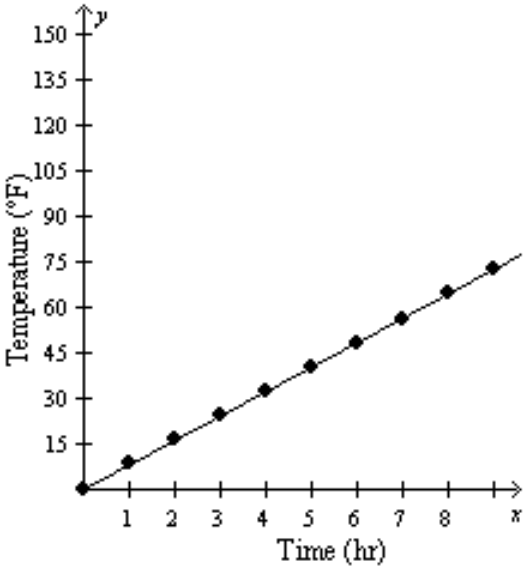
ItemID: DD.1000634

44. The temperature of air in a room that began at $55°$ F is increasing by $8°$ F per hour. Write a function that describes the temperature of the air over time. Graph the function to show the temperatures over the first 10 hours.

A. $y = 8x + 47$



B. $y = 8x$



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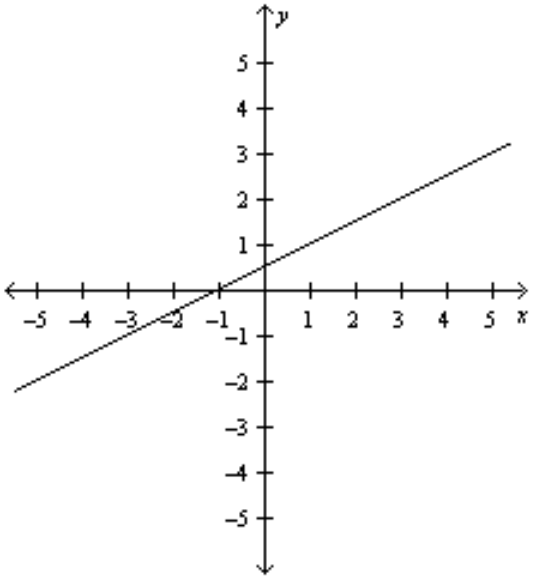
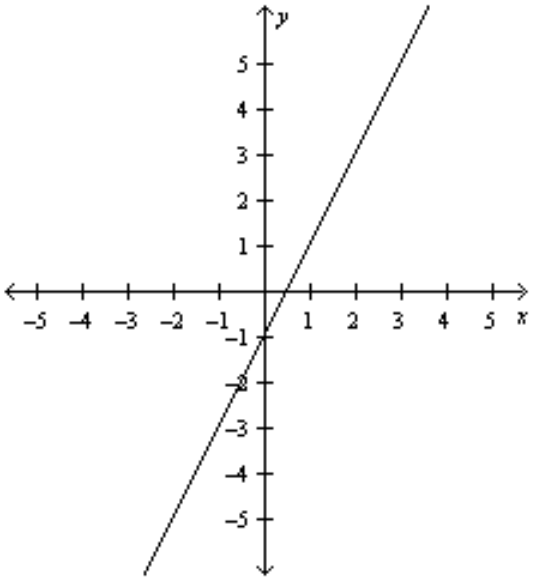
45. Graph the linear equation $y = 2x - 1$. Then tell whether it represents a function.

A.



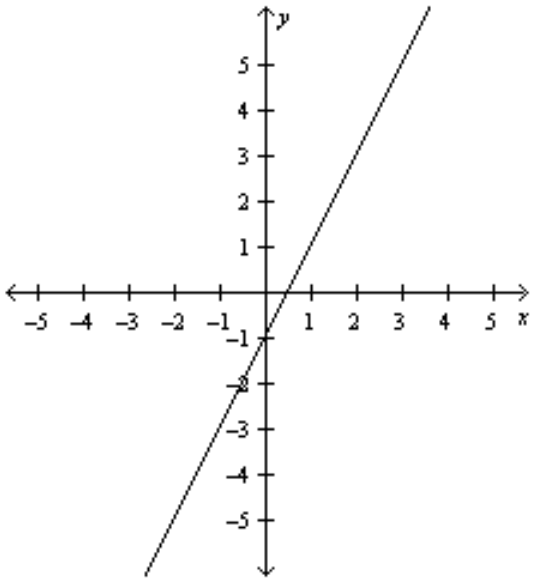
Yes, $y = 2x - 1$ represents a function.

B.



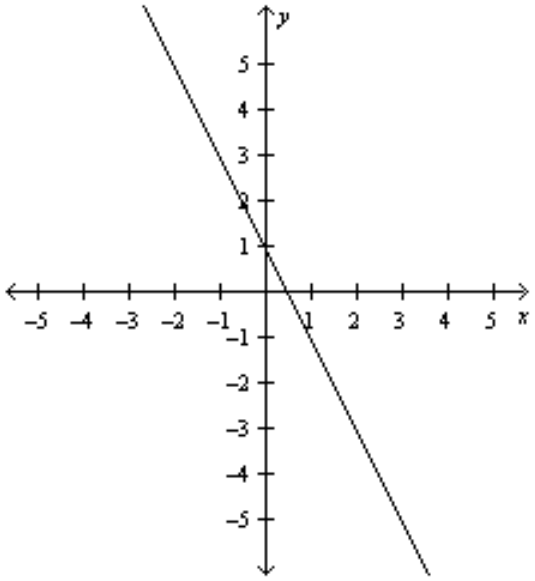
No, $y = 2x - 1$ does not represent a function.

C.



Yes, $y = 2x - 1$ represents a function.

D.



Yes, $y = 2x - 1$ represents a function.

ItemID: DD-HOLT.1036150

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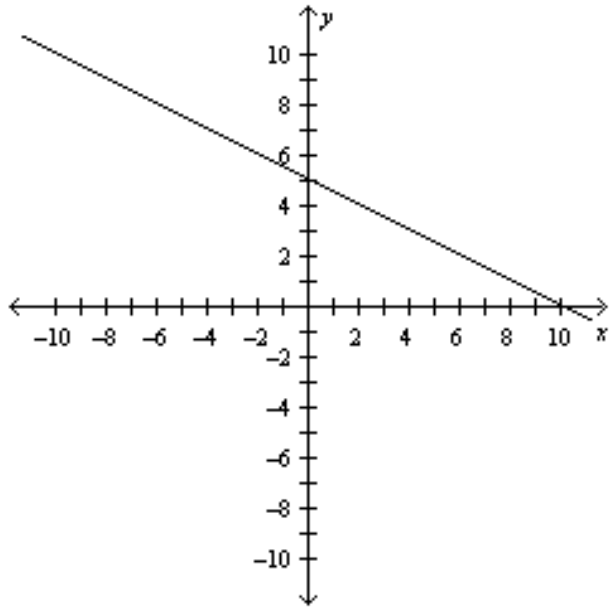
46. Find the x - and y -intercepts.



A. x -intercept: –10 , y -intercept: 5

B. x -intercept: 5 , y -intercept: 10

C. x -intercept: 10 , y -intercept: –5

D. x -intercept: 10 , y -intercept: 5

ItemID: DD-HOLT.1036155

47. Find the x - and y -intercepts of $-x + 2y = 8$.

A. x -intercept: -11 , y -intercept: 4

B. x -intercept: -11 , y -intercept: 3

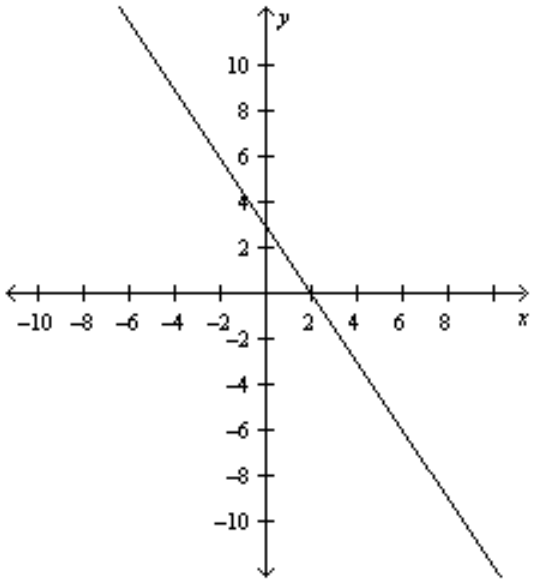
C. x -intercept: –8 , y -intercept: 3

D. x -intercept: –8 , y -intercept: 4

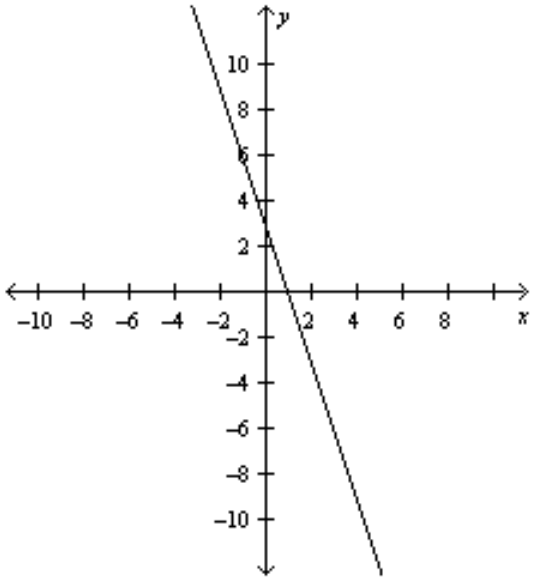
ItemID: DD-HOLT.1036156

48. Use intercepts to graph the line described by the equation $3x + 2y = 6$.

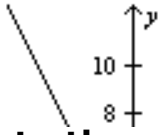
A. x -intercept: 2 , y -intercept: 3



B. x -intercept: 1 , y -intercept: 3



C. x -intercept: 1 , y -intercept: 2



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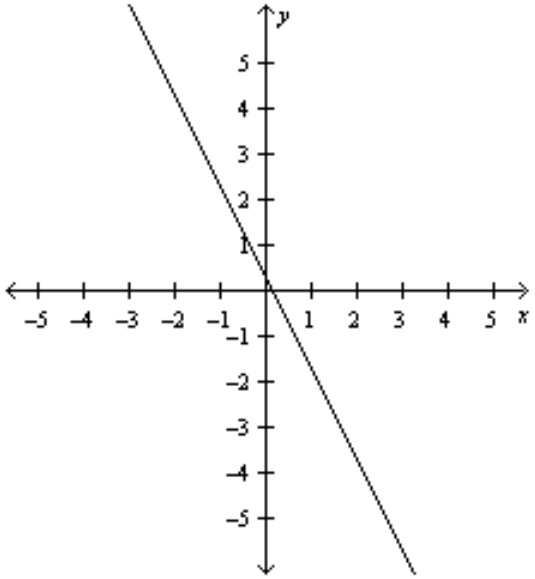
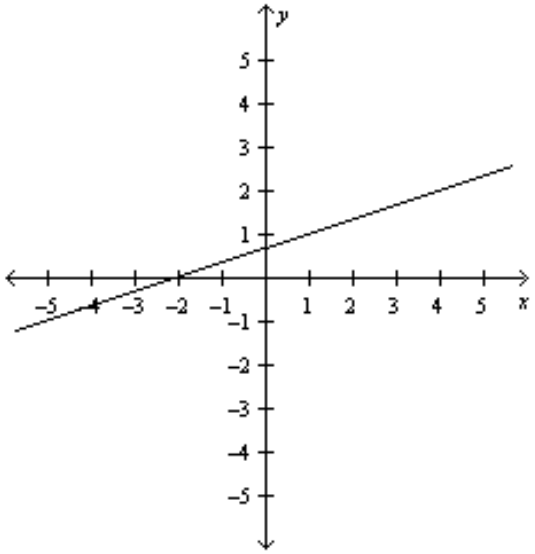
49. Graph the line with the slope $\frac{1}{3}$ and y -intercept –2 .

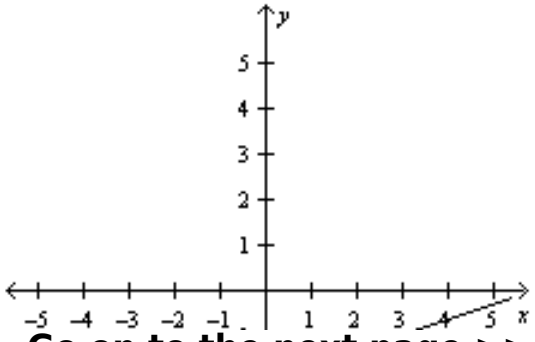
A.



B.



C.



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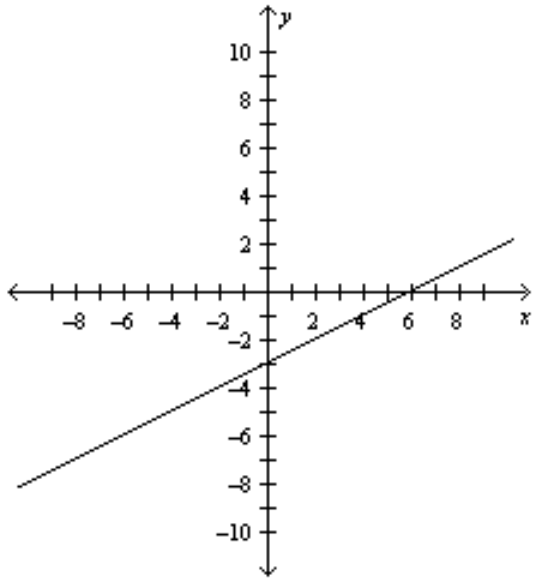
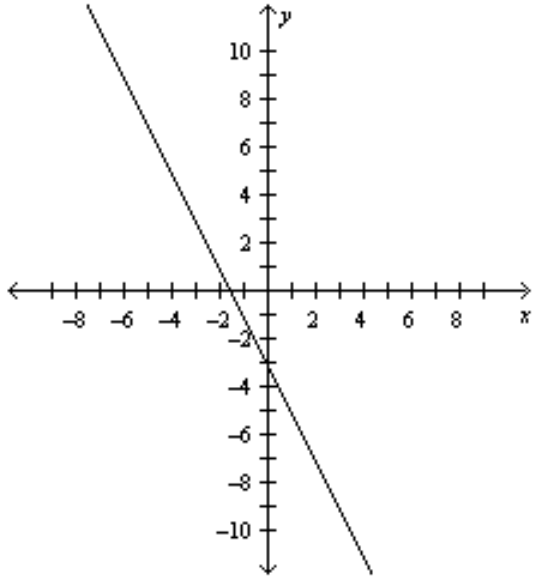
50. Write the equation $4x + 8y = -24$ in slope-intercept form. Then graph the line described by the equation.

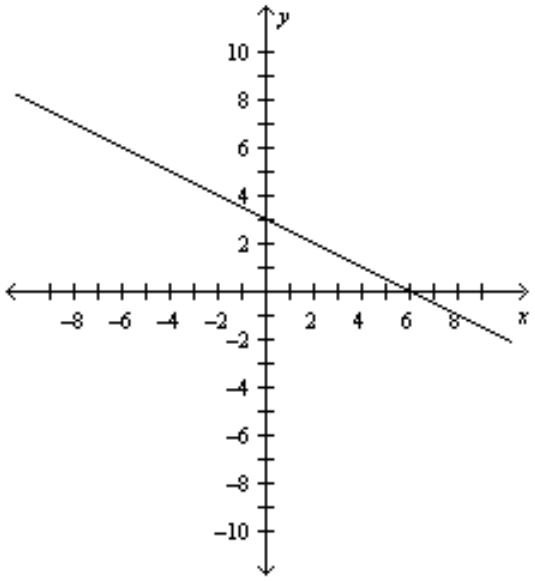
A. $y = -\frac{1}{2}x - 3$



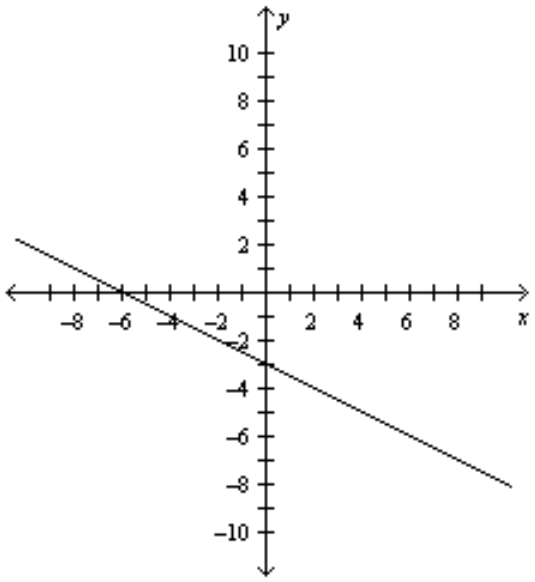
B. $y = -\frac{1}{2}x - 3$



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



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



ItemID: DD-HOLT.1036175

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51. Tell whether (8 , 5) is a solution of $y > x + 7$.

A. No, (8 , 5) is not a solution of $y > x + 7$.

B. Yes, (8 , 5) is a solution of $y > x + 7$.

ItemID: DD-HOLT.1036209

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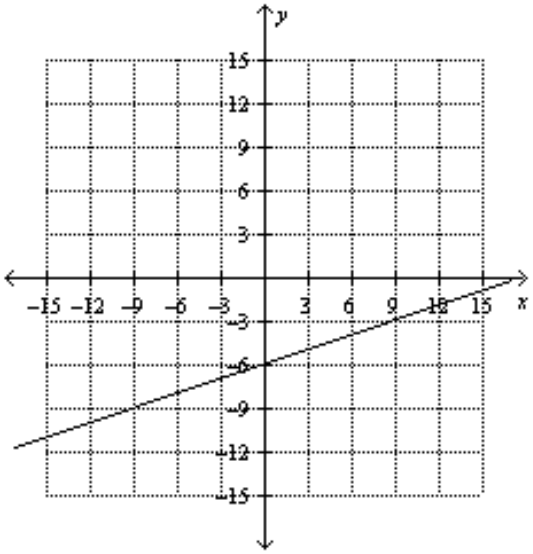
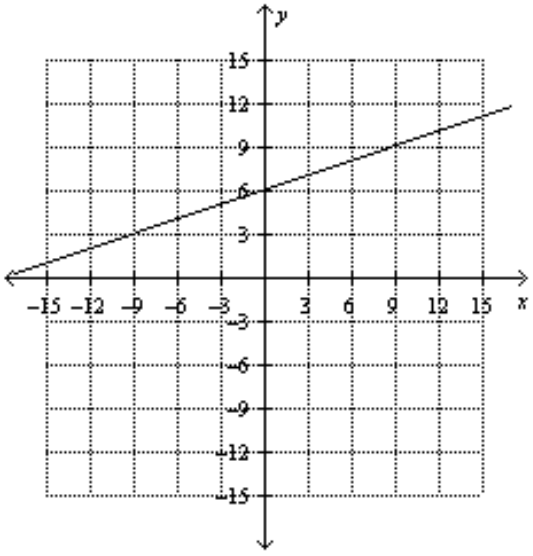
52. Graph the line with slope $-\frac{1}{3}$ that passes through (–6 , –4).

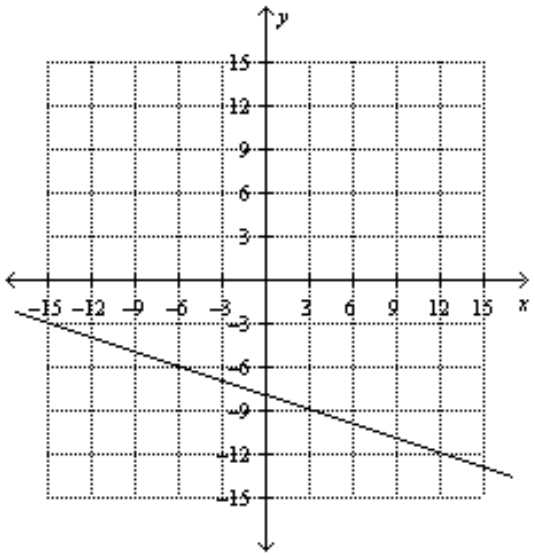
A.



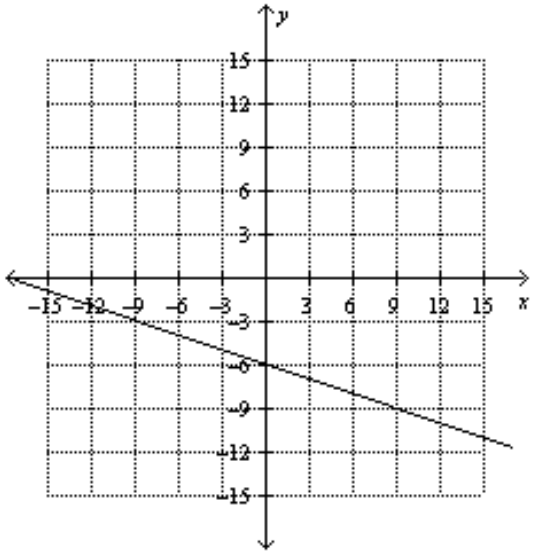
B.



C.



D.



ItemID: DD-HOLT.1036473

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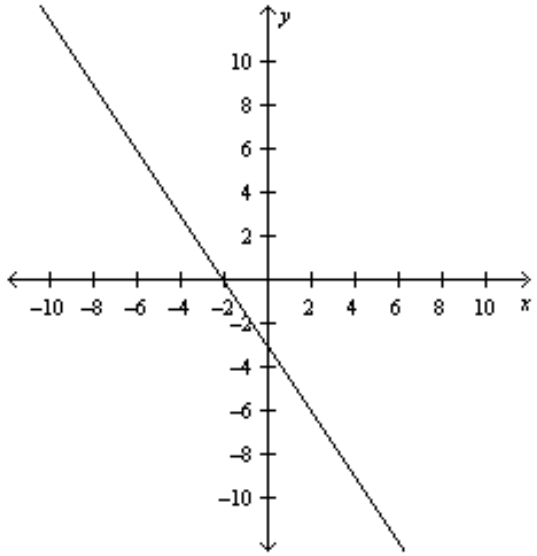
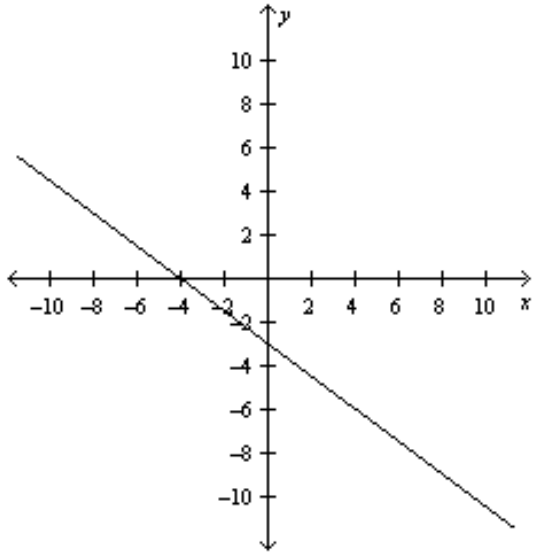
53. Find the intercepts of $-x - y = 2$, and graph the line.

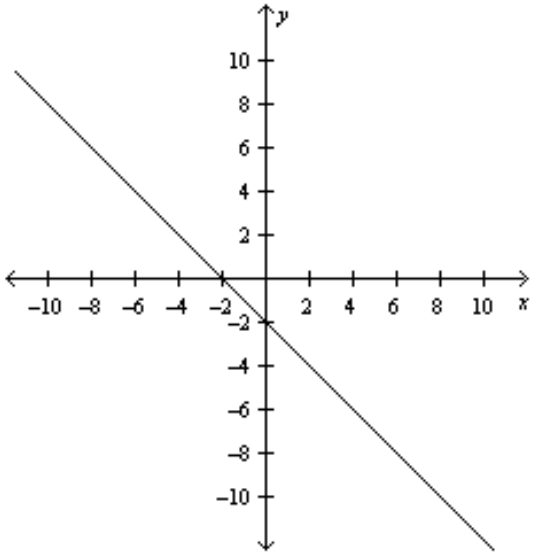
A. x -intercept: –2 ,
y -intercept: -3



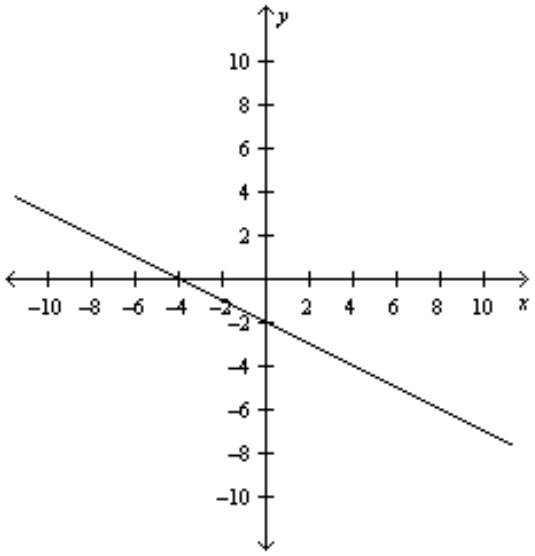
B. x -intercept: -4
, y -intercept: -3



C. x -intercept: –2 ,
y -intercept: –2



D. x -intercept: -4
, y -intercept: –2



ItemID: DD-HOLT.1036474

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54. Marvel was given the points (3, 1), (1, –1), (3, 2) and (2, 1). Which of those points lie on the line defined by $3x - 2y = 5$?

A. (1, –1) only

B. (3, 1) and (2, 1) only

C. (1, –1) and (3, 2) only

D. All the points lie on the line.

ItemID: DD.1007249

55. Which equation represents a line having an *x*-intercept of 3 and a *y*-intercept of $\frac{2}{5}$?

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

B. $y = -\frac{2}{15}(x - 3)$

C. $y = -\frac{2}{15}(x + 3)$

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

ItemID: DD.1007250

56. Which equation represents a line having an *x*-intercept of $\frac{3}{4}$ and a *y*-intercept of 6?

A. $y = -8x + 6$

B. $y = -\frac{1}{8}x + 6$

C. $y = \frac{1}{8}x + 6$

D. y=8x+6

ItemID: DD.1007251

57. Which of the following pairs of points could be used to draw the line defined by $y = \frac{1}{2}x - 4$?

A. (6, –2) and (4, –2)

B. (4, –2) and (2, –3)

C. (2, –3) and (0, 4)

D. (0, 4) and (6, –2)

ItemID: DD.1007252

58. Without graphing, tell whether the point (10 , 37) is on the graph of $y = 3x + 7$.

A. Yes

B. No

ItemID: DD-HOLT.1036151

59. Write an equation in slope-intercept form for the line that passes through (3 , 7) and (7 , 4).

A. $y = -\frac{3}{4}x + \frac{37}{4}$

B. $y = \frac{3}{4}x + \frac{37}{4}$

C. $y = -\frac{4}{3}x + \frac{37}{4}$

D. $y = -\frac{3}{4}x + \frac{4}{37}$

ItemID: DD-HOLT.1036180

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60. Determine whether the pair of lines $12x + 3y = 3$ and $y = 4x + 1$ are parallel, intersect, or coincide.

A. intersect

B. coincide

C. parallel

ItemID: DD-HOLT.1037336

61. The solution of the system $\begin{cases} 2x + 5y = 2 \\ 2x - y = 14 \end{cases}$ is (a, b). What is $a + b$?

A. –8

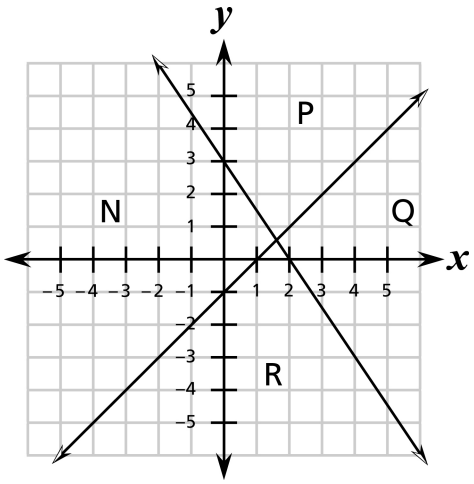
B. –4

C. 4

D. 8

ItemID: DD.1007257

62. Which region represents the solution of $\begin{cases} y \le -\frac{3}{2}x + 3 \\ y \ge x - 1 \end{cases}$?



A. Region N

B. Region P

C. Region Q

D. Region R

ItemID: DD.1007258

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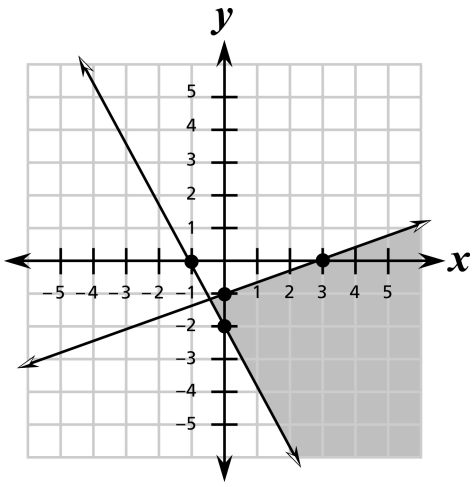
63. The shaded region represents the solution of which pair of inequalities?



A. $\begin{cases} y \geq -2x - 2 \\ y \geq \frac{1}{3}x - 1 \end{cases}$

B. $\begin{cases} y \geq -2x - 2 \\ y \leq \frac{1}{3}x - 1 \end{cases}$

C. $\begin{cases} y \leq -2x - 2 \\ y \geq \frac{1}{3}x - 1 \end{cases}$

D. $\begin{cases} y \leq -2x - 2 \\ y \leq \frac{1}{3}x - 1 \end{cases}$

ItemID: DD.1007259

64. Tell whether the ordered pair (5 , –3) is a solution of the system

$$\begin{cases} -3x + 2y = -21 \\ -x - y = -2 \end{cases}$$

.

A. no

B. yes

ItemID: DD-HOLT.1036188

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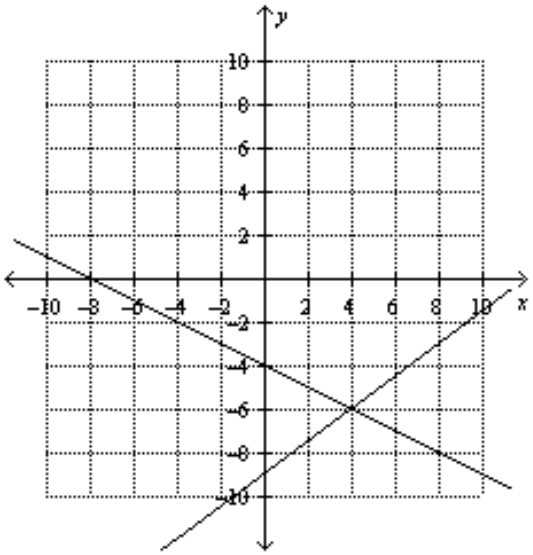
65.

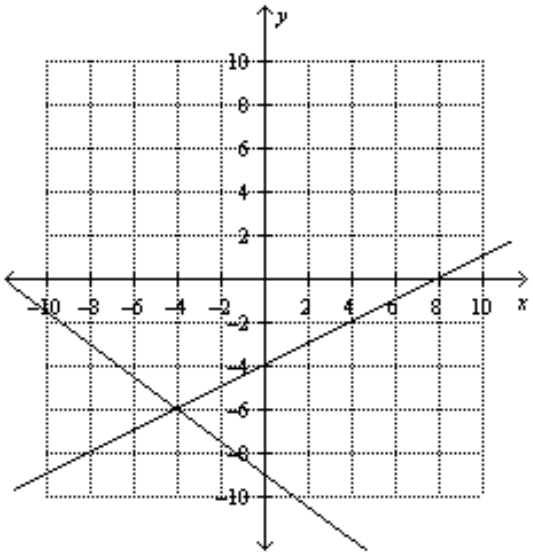
Solve the system by graphing.

$$\begin{cases} 3x + 4y = -36 \\ -2x + 4y = -16 \end{cases}$$

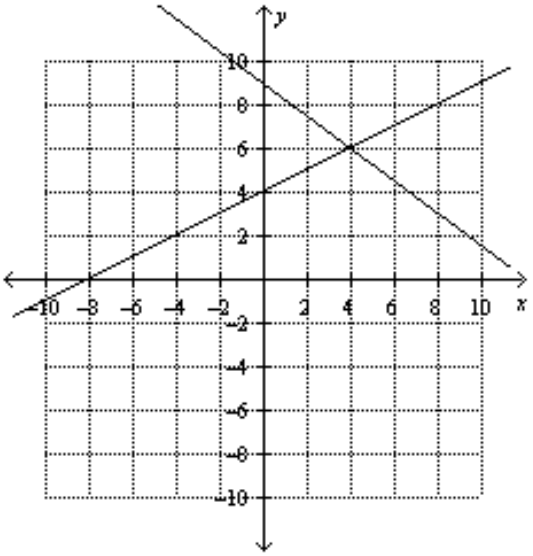
A. $(4, -6)$



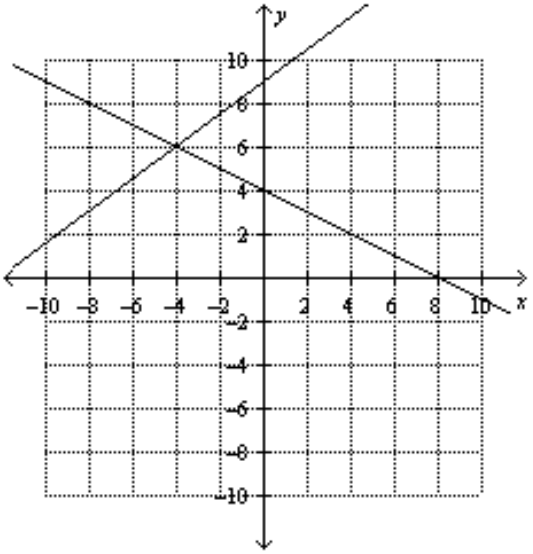
B. $(-4, -6)$



C. $(4, 6)$



D. $(-4, 6)$



ItemID: DD-HOLT.1036189

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66. Solve $\begin{cases} 3x + y = -3 \\ y = x + 5 \end{cases}$ by substitution. Express your answer as an ordered pair.

A. $(3, -2)$

B. $\left(-\frac{8}{3}, -3\right)$

C. $\left(-\frac{4}{3}, 1\right)$

D. $(-2, 3)$

ItemID: DD-HOLT.1036192

67. Solve $\begin{cases} 4x - 4y = -16 \\ x - 2y = -12 \end{cases}$ by substitution. Express your answer as an ordered pair.

A. (8 , –4)

B. (4 , –8)

C. (–2 , 4)

D. (4 , 8)

ItemID: DD-HOLT.1036193

68. Solve $\begin{cases} 2a - b + c = -5 \\ a - b = -2 \\ 2a + b = 5 \end{cases}$ by substitution.

A. $a = 1, b = 3, c = -6$

B. $a = 1, b = 3, c = -4$

C. $a = -2, b = 0, c = -2$

D. $a = -2, b = 0, c = -1$

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69. Solve $\begin{cases} 3x - 6y = 12 \\ 2x + 6y = -12 \end{cases}$ by elimination. Express your answer as an ordered pair.

A. (–2 , –3)

B. (–2 , 0)

C. (0 , –2)

D. (–8 , –6)

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70. Solve $\begin{cases} 3x - 2y = 15 \\ x - 2y = 5 \end{cases}$ by elimination. Express your answer as an ordered pair.

A. (5 , 0)

B. (5 , 17.5)

C. (5 , 22.5)

D. (5 , 1)

ItemID: DD-HOLT.1036197

71. Solve $\begin{cases} 2x - 5y = -7 \\ 5x - 3y = 11 \end{cases}$ by elimination. Express your answer as an ordered pair.

A. (3 , 4)

B. (4 , 3)

C. (3 , 2)

D. $\left(\frac{4}{7}, \frac{8}{5}\right)$

ItemID: DD-HOLT.1036198

72. The sum of the digits of a two-digit number is 8. If the number is multiplied by 4, the result is 104. Write and solve a system of equations. Find the number.

A. $\begin{cases} x + y = 8 \\ 4(x + y) = 104 \end{cases}$

The number is 35.

B. $\begin{cases} x + y = 8 \\ 4(10x + y) = 104 \end{cases}$

The number is 17.

C. $\begin{cases} x + y = 8 \\ 4(2x + y) = 104 \end{cases}$

The number is 18.

D. $\begin{cases} x + y = 8 \\ 4(10x + y) = 104 \end{cases}$

The number is 26.

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73. Solve $\begin{cases} y = -x + 8 \\ x + y = 7 \end{cases}$.

A. $\left(\frac{1}{2}, \frac{15}{2}\right)$

B. This system has infinitely many solutions.

C. $\left(-\frac{1}{2}, \frac{17}{2}\right)$

D. This system has no solutions.

ItemID: DD-HOLT.1036201

74. Solve $\begin{cases} y = 2x - 1 \\ 2x - y - 1 = 0 \end{cases}$.

A. This system has exactly one solution.

B. This system has infinitely many solutions.

C. This system has no solution.

D. (1 , 1) and (0, 0)

ItemID: DD-HOLT.1036202

75. Classify $\begin{cases} x - 8y = 6 \\ 2x - 16y = 12 \end{cases}$. Give the number of solutions.

A. This system is inconsistent. It has no solutions.

B. This system is consistent. It has infinitely many solutions.

C. This system is consistent. It has one solution.

D. This system is inconsistent. It has infinitely many solutions.

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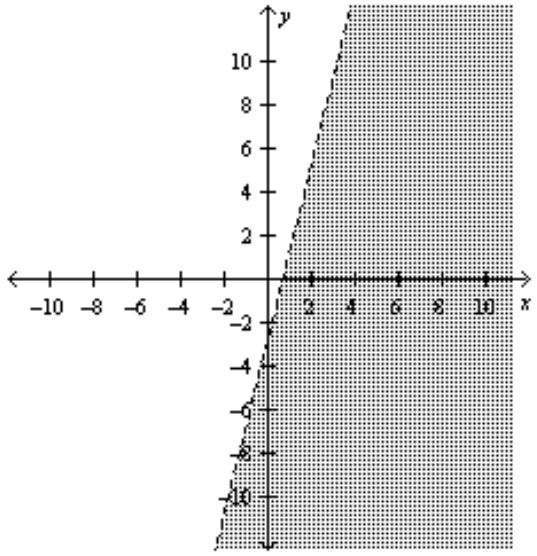
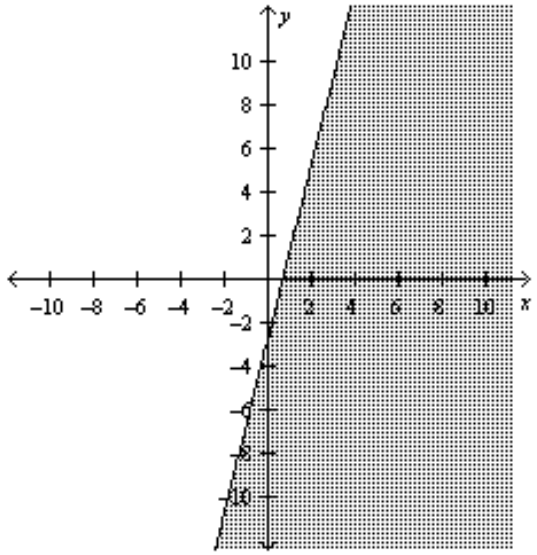
76. Graph the solutions of the linear inequality $-8x + 2y > -6$.

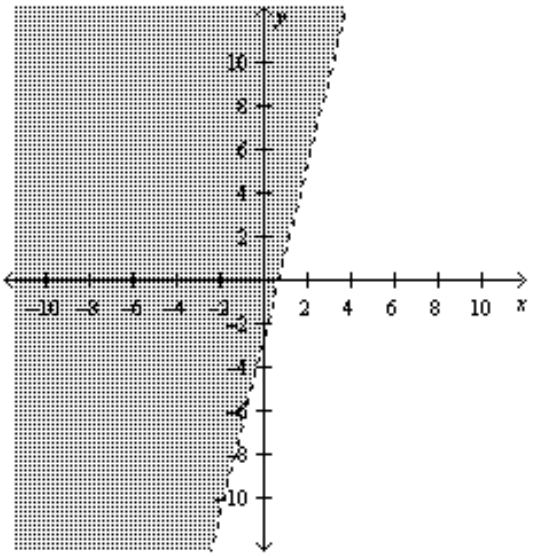
A.



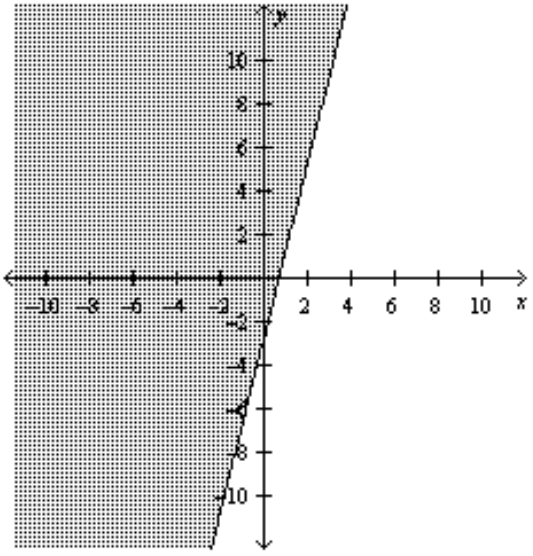
B.



C.



D.



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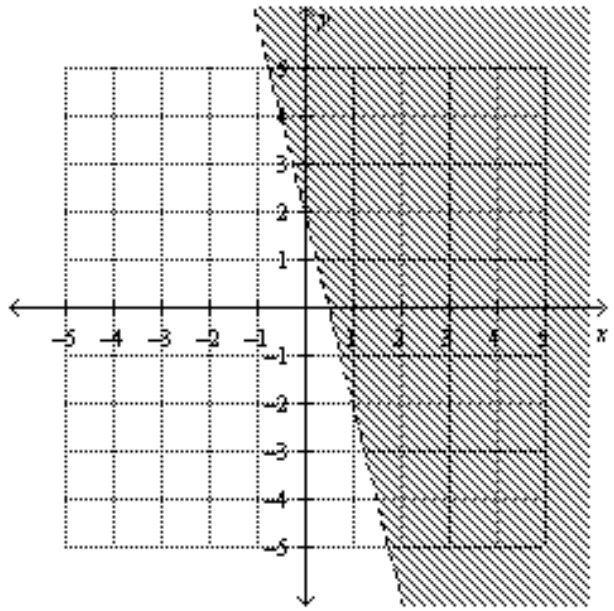
77. Write an inequality to represent the graph.



A. $y >= -4x + 2$

B. $y > 2x - 4$

C. $y > -4x + 2$

D. $y < -4x + 2$

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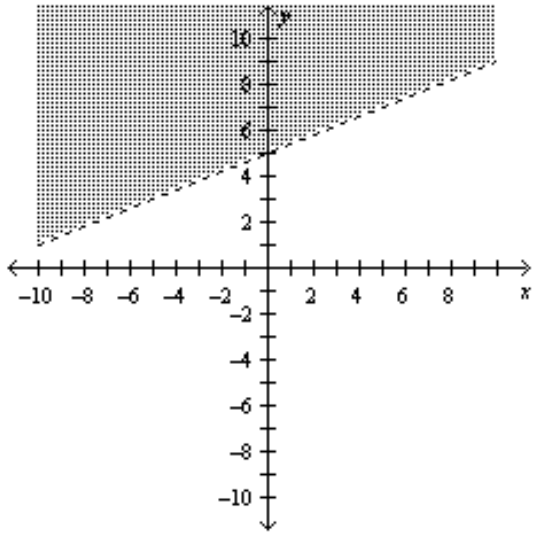
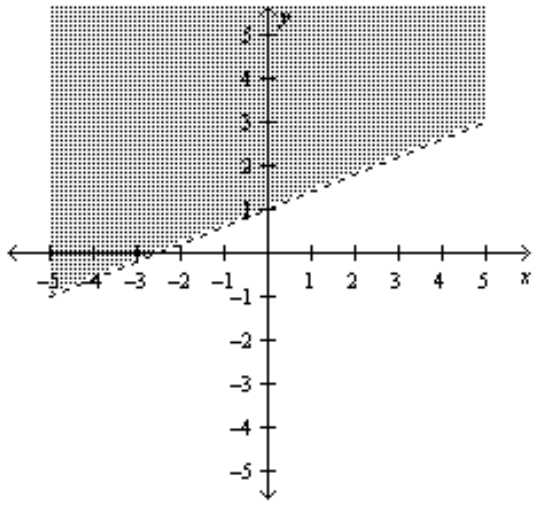
78. Graph the inequality

$0 > 15 + 6x - 15y$.

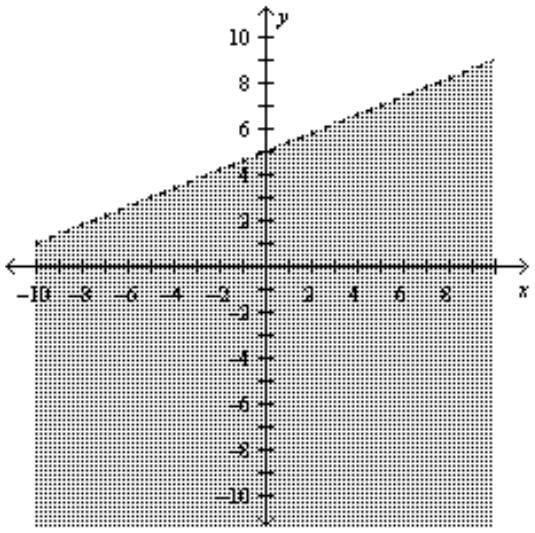
A.



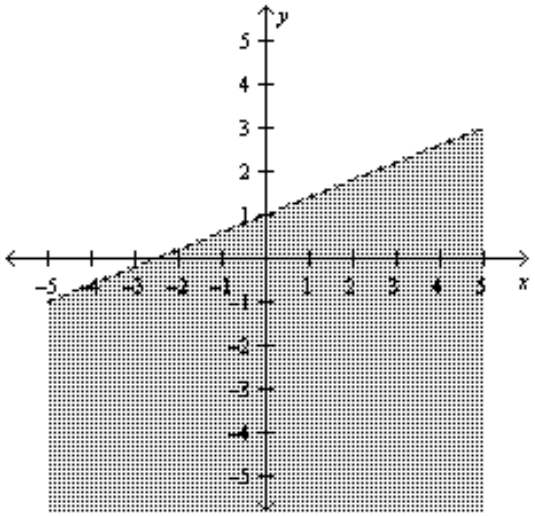
B.



C.



D.



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79. Tell whether (2 , 7) is a solution of

$$\begin{cases} y \geq 4x \\ y < x + 2 \end{cases}$$.

A. No , (2 , 7) is not a solution of the system.

B. Yes , (2 , 7) is a solution of the system.

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80. Estimate the area of the overlapping solution regions.

$$\begin{cases} x \geq 0 \\ y \geq x - 2.5 \\ y \leq -x + 4 \end{cases}$$

A. About 12 square units

B. About 10 square units

C. About 19 square units

D. About 8 square units

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