Math 084 W2010 Worksheet 4.1 v02
Interest Exercises
Dressler

Name_____

Indicate in which quadrant the point lies.

1) (9, 11)

2) (18, 5)

3) (–2, 5)

4) (–10, 19)

5) (–20, –5)

6) (–2, –15)

7) (2, –14)

8) (4, –6)

9) $\left(-\frac{1}{2}, \frac{7}{8}\right)$

10) $\left(-\frac{3}{4}, \frac{1}{2}\right)$

11) $\left(-\frac{1}{4}, -\frac{4}{7}\right)$

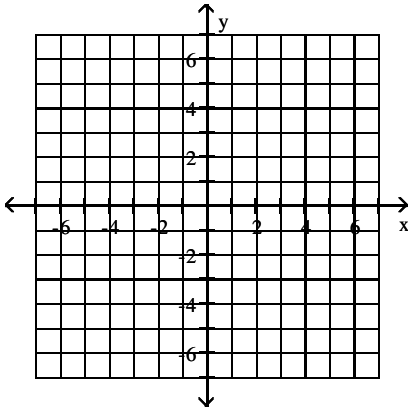
12) $\left(-\frac{1}{2}, -\frac{4}{5}\right)$

13) $\left(\frac{4}{5}, -\frac{2}{5}\right)$

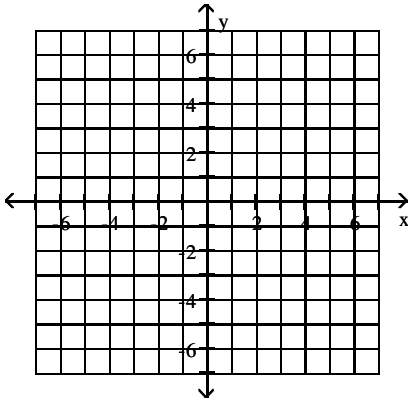
14) $\left(\frac{3}{5}, -\frac{1}{4}\right)$

Plot the given point in a rectangular coordinate system.

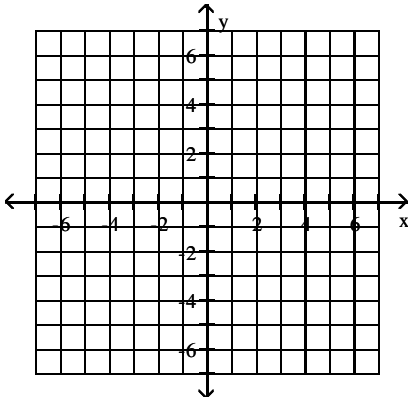
15) (4, 6)



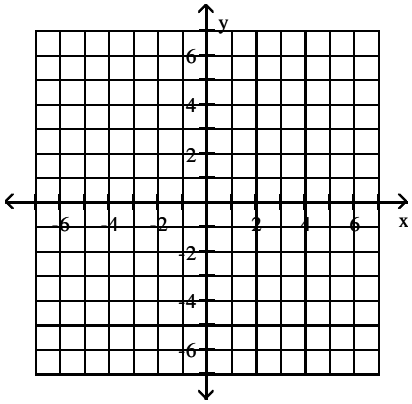
16) (–1, 4)



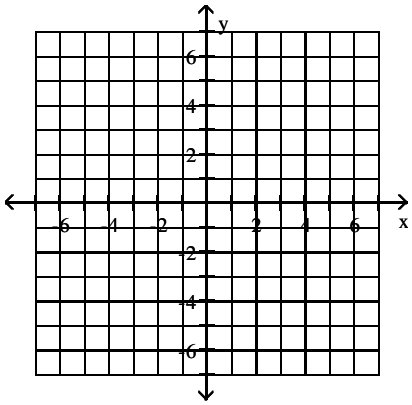
17) (6, –2)



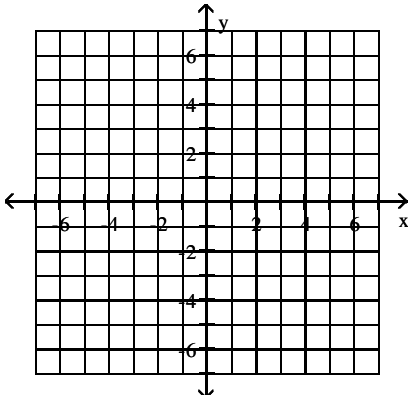
18) (–5, –1)



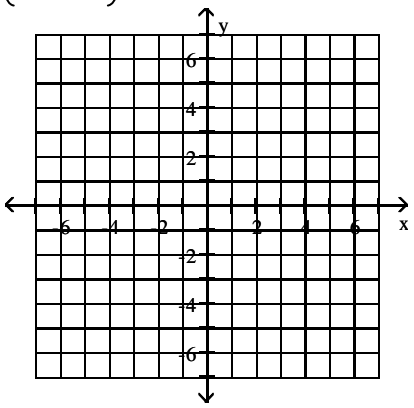
19) (0, 6)



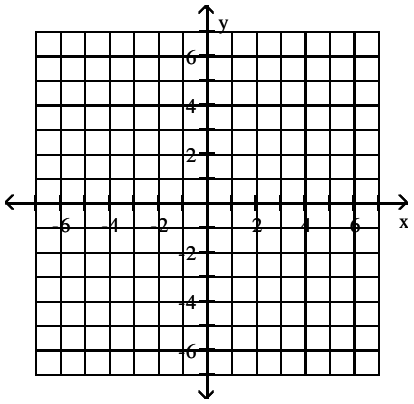
20) (–6, 0)



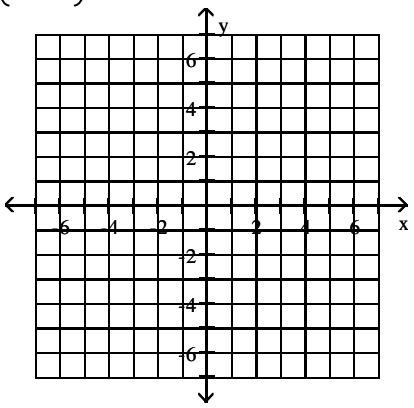
21) $\left(-\frac{3}{2}, -\frac{7}{2}\right)$



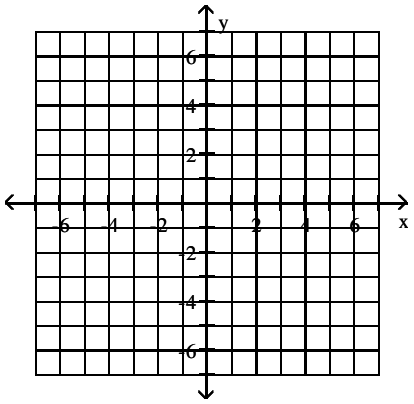
22) $\left(-\frac{11}{2}, 0\right)$



23) $\left(0, -\frac{1}{2}\right)$

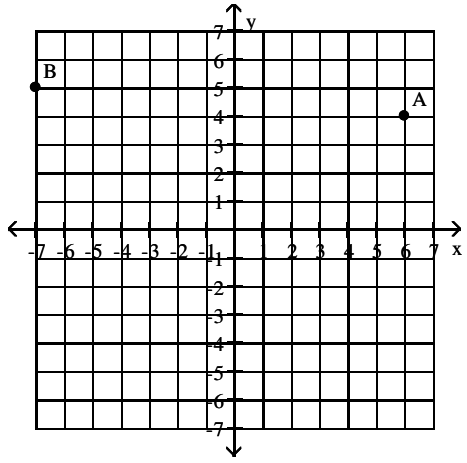


24) $\left(-\frac{11}{2}, \frac{9}{2}\right)$

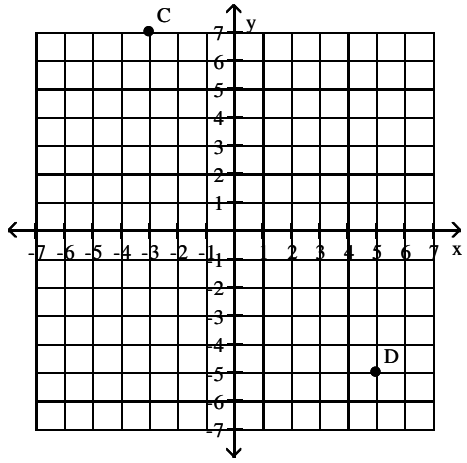


Give the ordered pairs that correspond to the points labeled in the figure.

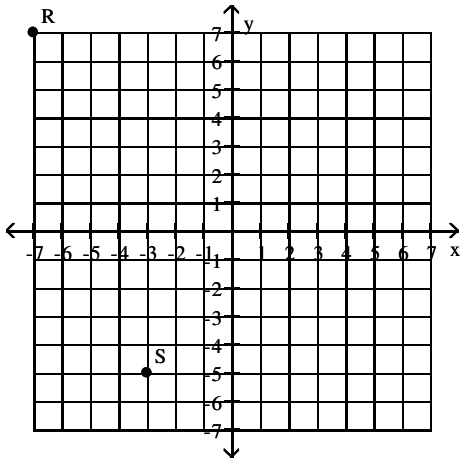
25)



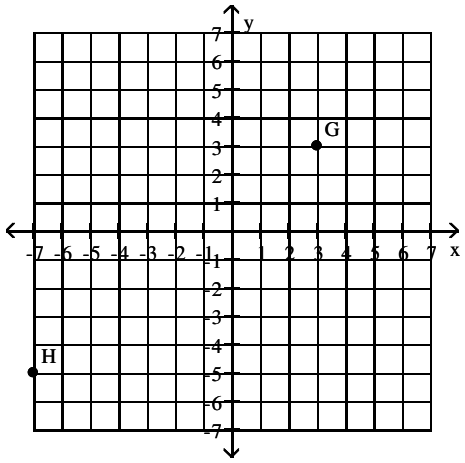
26)



27)



28)



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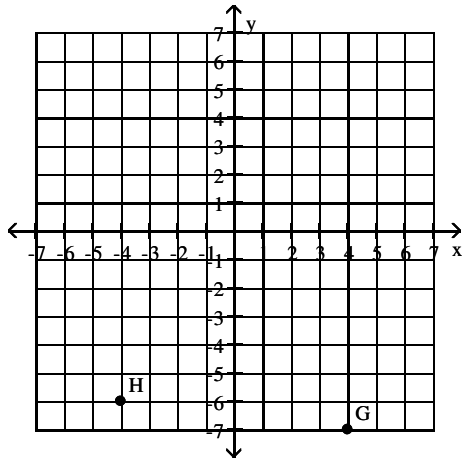


Determine whether the ordered pair is a solution of the given equation.

30) (5, –2)
$y = x - 7$

31) (2, 1)
$y = x - 1$

32) (6, 6)
$y = x - 12$

33) (1, –2)
$y = x + 1$

34) (–3, 3)
$x - y = -6$

35) (2, –6)
$x - y = 8$

36) (–5, 6)
$x - y = -1$

37) (–3, –3)
$x - y = 6$

38) (–4, 1)
$4x + 3y = -13$

39) (–3, –4)
$4x + 2y = -20$

Find a solution to the equation using the value given for x.

40) $y = 2x$; $x = 4$.

41) $y = 5x$; $x = -2$.

42) $y = -3x$; $x = -3$.

43) $y = -8x$; $x = 4$.

44) $y = 5x + 4$; $x = 0$

45) $y = 2x - 8$; $x = -4$

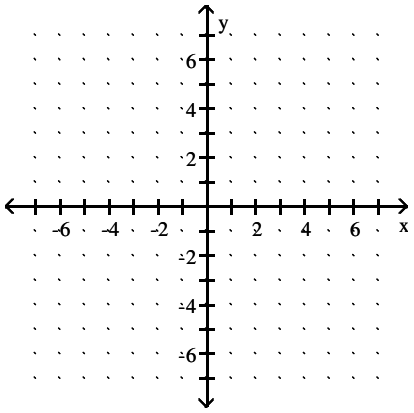
46) $y = -7x + 9$; $x = 2$

47) $y = 6x + 7$; $x = -4$

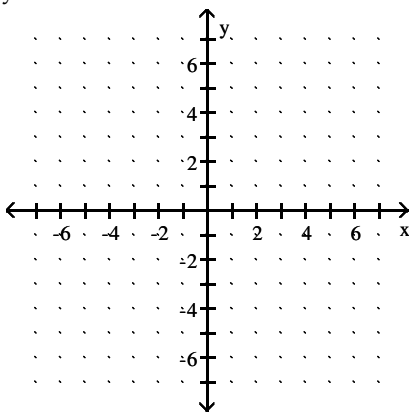
48) $y = -8x - 5$; $x = 3$

Graph the linear equation in two variables.

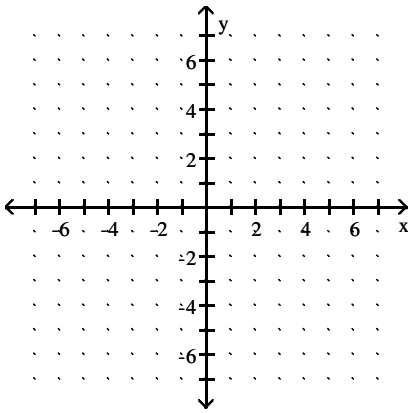
49) $y = 2x$



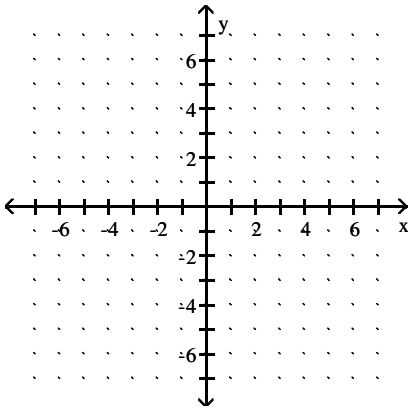
50) $y = -6x$



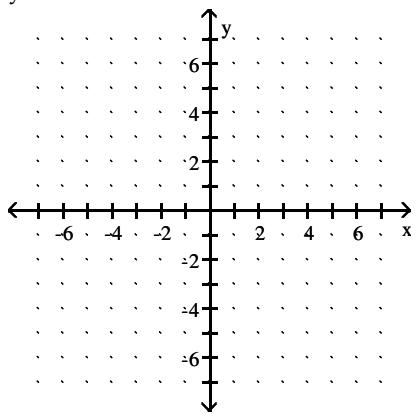
51) $y = x + 4$



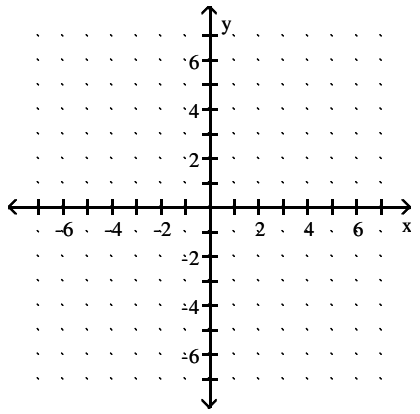
52) $y = -x + 5$



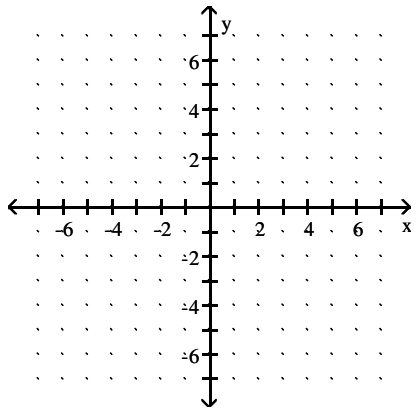
53) $y = 3x + 1$



54) $y = -5x - 1$

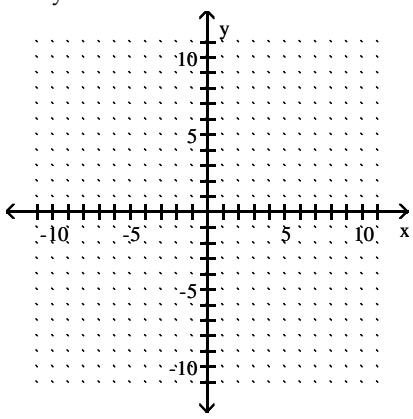


55) $y = \frac{1}{3}x + 2$

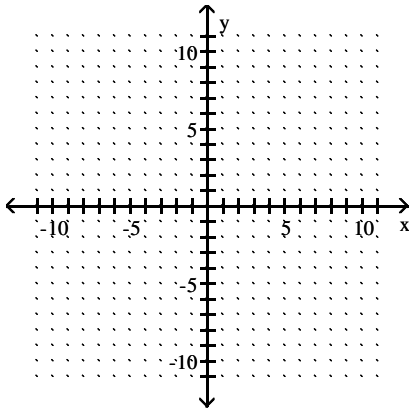


Write the sentence as a linear equation in two variables. Then graph the equation.

56) The y–variable is 2 less than the x–variable.



57) The y–variable is 4 less than 7 times the x–variable.



Solve the problem.

58) A customer at a store bought 4 bottles of juice and 3 fruit pies for a total cost of $48.00. If x represents the cost of a bottle of juice and y represents the cost of one fruit pie, write an equation in two variables that reflects the given conditions.

59) A customer at a store bought 8 bottles of juice and 4 fruit pies for a total cost of $56.00. If a bottle of juice costs $3.25, find the cost of a fruit pie.

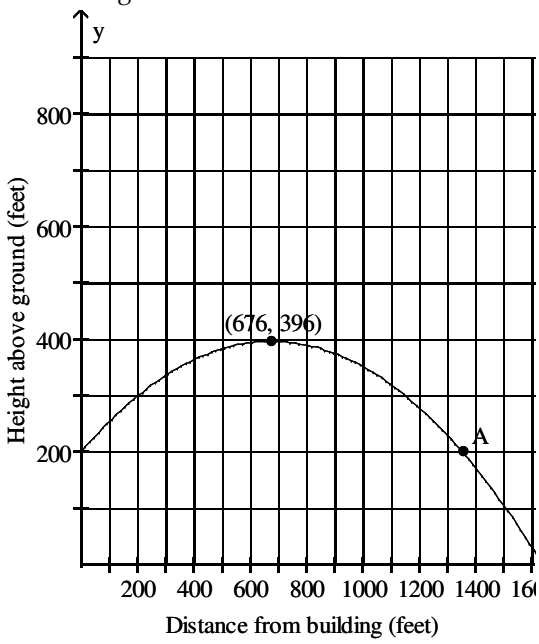
60) The linear equation in two variables y = 0.25x + 225 models the total weekly cost, y, in dollars, for renting a car and driving it x miles. The equation indicates that the rental company charges a fixed amount of $225 for the week plus a cost of $0.25 for each mile the car is driven. Find a solution of y = 0.25x + 225 using 400 for x.

61) The linear equation in two variables y = 2x + 70 models the total cost, y, in dollars, for towing a car x miles. The equation indicates that the towing company charges a fixed amount of $70 to send a truck to pick up the car plus a cost of $2 for each mile the car is towed. Find a solution of y = 2x + 70 using 13 for x.

62) The linear equation in two variables y = 119 – 3x models the amount of water, y, in ounces, remaining in a leaky bucket x minutes after the bucket was filled. The equation indicates that the bucket initially contains 119 ounces of water and loses 3 ounces each minute. Find a solution of y = 119 – 3x using 3 for x.

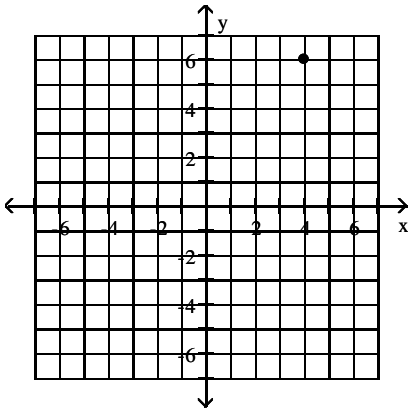
63) The linear equation in two variables y = 700x + 2093 models the altitude above sea level, y, in feet, of an airplane x minutes after taking off from a high plateau. The equation indicates that the airplane's altitude is initially 2093 feet above sea level and increases 700 feet each minute. Find a solution of y = 700x + 2093 using 8 for x.

64) A projectile is fired from the top of a building 200 feet high. The graph shows the height of the projectile, in feet, above the ground, in terms of its distance, in feet, from the base of the building.

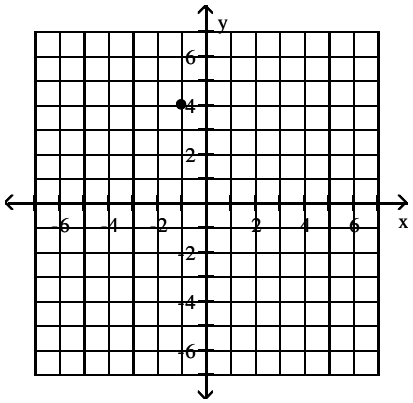


What is the maximum height of the projectile? What is the distance of the projectile from the base of the building when it reaches its maximum height?

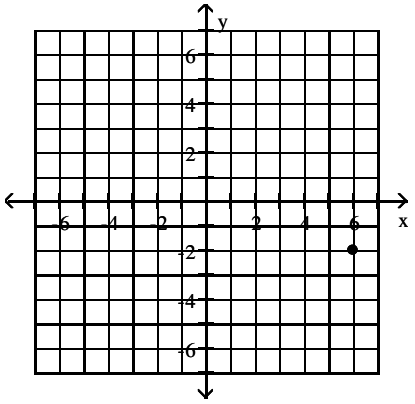
1) I
2) I
3) II
4) II
5) III
6) III
7) IV
8) IV
9) II
10) II
11) III
12) III
13) IV
14) IV
15)



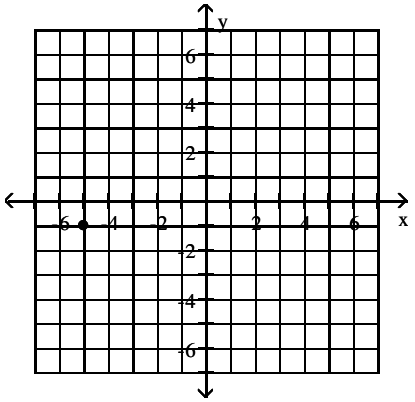
16)



17)



18)



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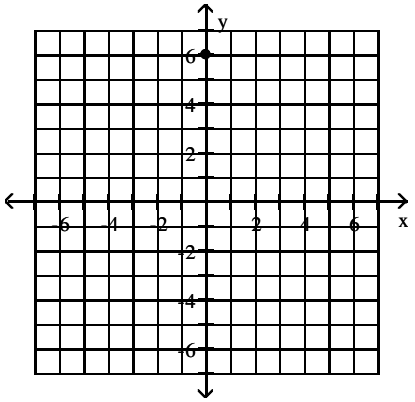

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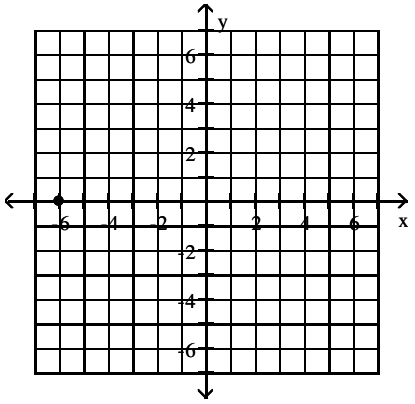

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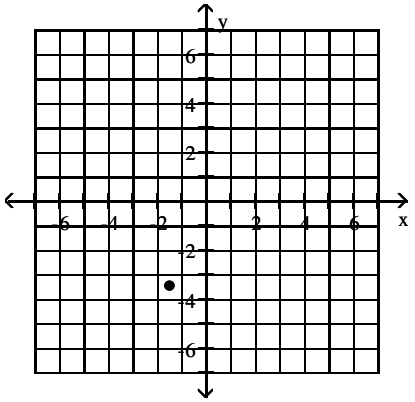

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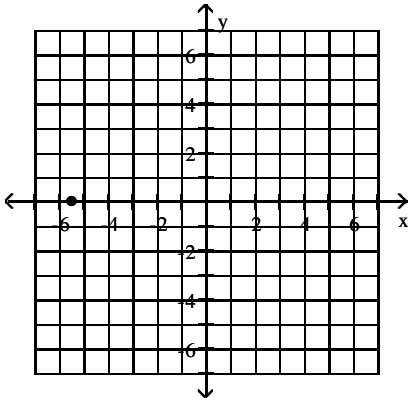

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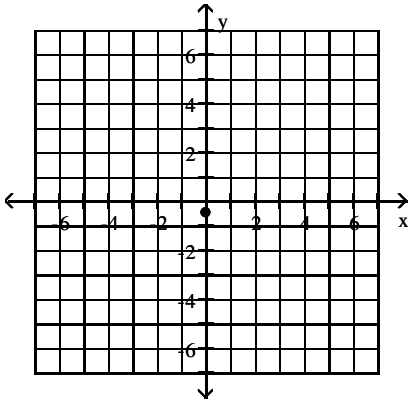

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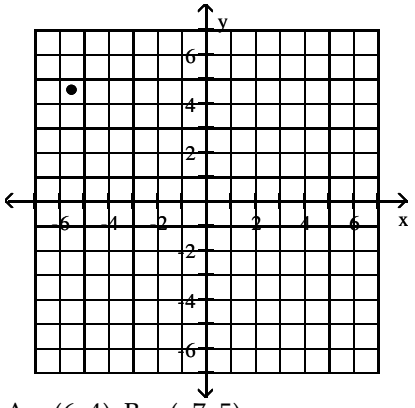
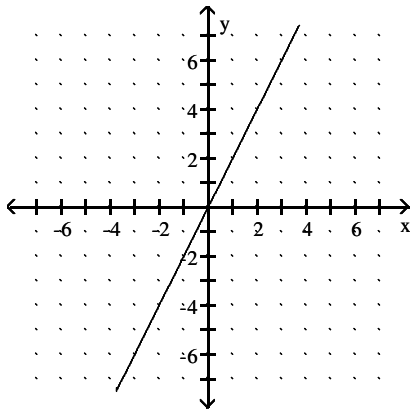


25) A = (6, 4), B = (–7, 5)
26) C = (–3, 7), D = (5, –5)
27) R = (–7, 7), S = (–3, –5)
28) G = (3, 3), H = (–7, –5)
29) G = (4, –7), H = (–4, –6)
30) Yes
31) Yes
32) No
33) No
34) Yes
35) Yes
36) No
37) No
38) Yes
39) Yes
40) (4, 8)
41) (–2, –10)
42) (–3, 9)
43) (4, –32)
44) (0, 4)
45) (–4, –16)
46) (2, –5)
47) (–4, –17)
48) (3, –29)

49)



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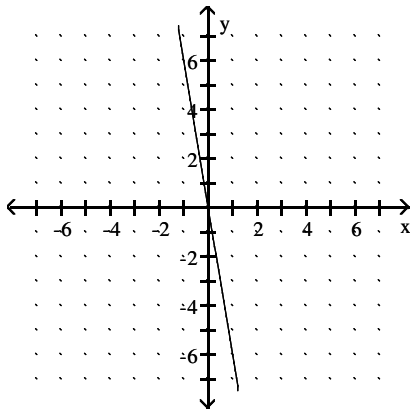

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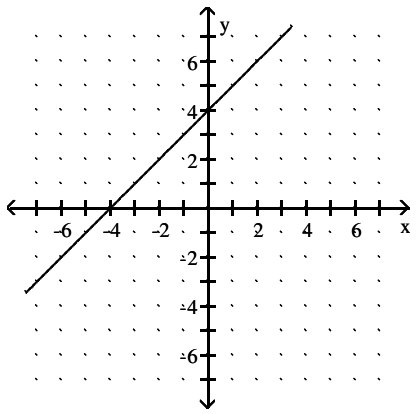

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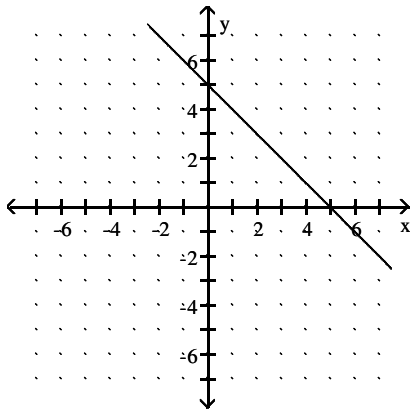
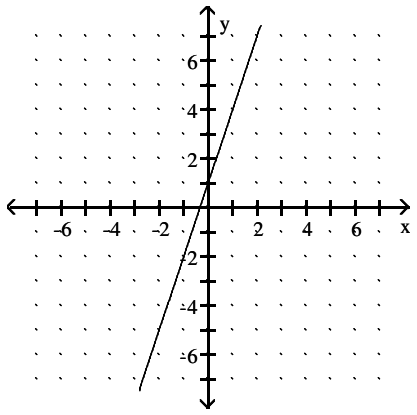
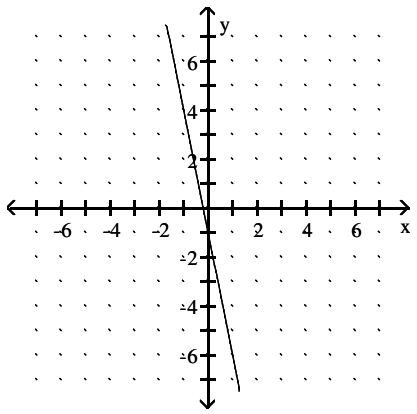


53)



54)



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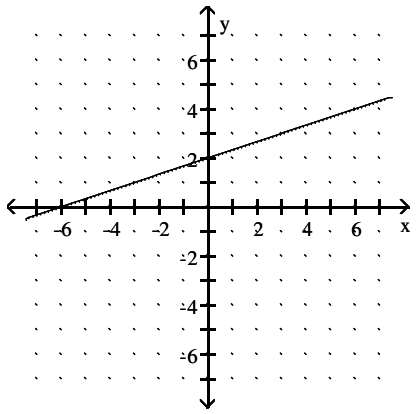
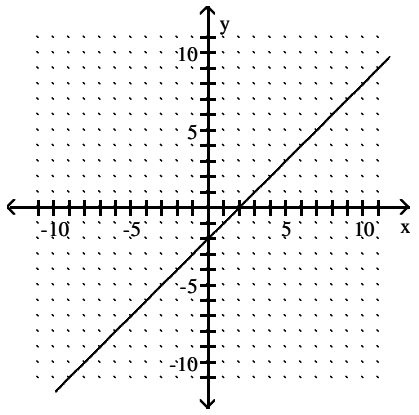
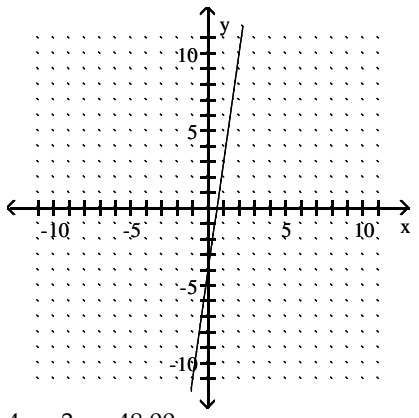


56) $y = x - 2$



57) $y = 7x - 4$



58) $4x + 3y = 48.00$
59) $7.50
60) (400, 325)
61) (13, 96)
62) (3, 110)
63) (8, 7693)
64) 396 feet; 676 feet