

## Summer Review Assignment

Solve each equation.

1)  $26 - 8k = 3(8k - 2)$

2)  $-8(x + 5) = -20 - 3x$

3)  $-36 - 7x = -4(5x - 1) + 8x$

4)  $-39 + 3m = -5(1 - 4m)$

Simplify.

5)  $9\sqrt{125}$

6)  $8\sqrt{256}$

7)  $6\sqrt{400}$

8)  $4\sqrt{48}$

9)  $3\sqrt{147}$

10)  $10\sqrt{162}$

11)  $-\sqrt{27} - 3\sqrt{20} - 2\sqrt{5} + 3\sqrt{5}$

12)  $-\sqrt{6} + 3\sqrt{3} + 2\sqrt{2} + 3\sqrt{12}$

13)  $-2\sqrt{54} - 2\sqrt{45} + 2\sqrt{5} - 3\sqrt{24}$

14)  $-3\sqrt{6} - \sqrt{54} - 3\sqrt{6} + 3\sqrt{24}$

15)  $3\sqrt{3} - 3\sqrt{12} + 3\sqrt{5} + 2\sqrt{12}$

16)  $2\sqrt{6} - 2\sqrt{6} - 2\sqrt{27} + 3\sqrt{6}$

17)  $\sqrt{15}(3 + \sqrt{5})$

18)  $5\sqrt{2}(2 - 3\sqrt{2})$

19)  $\sqrt{5}(\sqrt{3} + 5)$

20)  $\sqrt{3}(\sqrt{2} + \sqrt{6})$

21)  $-2\sqrt{15}(4 + 2\sqrt{10})$

22)  $\frac{4\sqrt{4}}{\sqrt{7}}$

23)  $\frac{7}{4\sqrt{2}}$

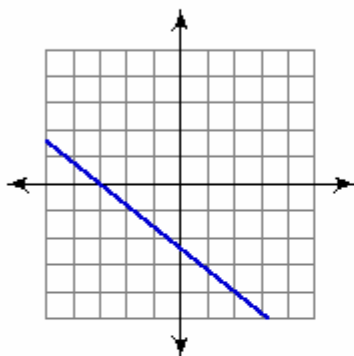
24)  $\frac{7\sqrt{4}}{2\sqrt{3}}$

25)  $\frac{\sqrt{3}}{\sqrt{5}}$

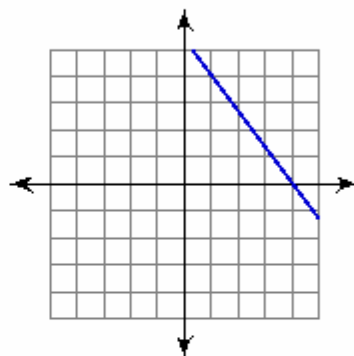
26)  $\frac{\sqrt{4}}{2\sqrt{10}}$

Find the slope of each line.

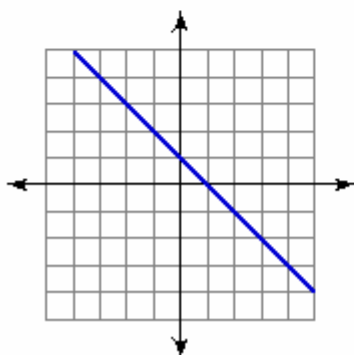
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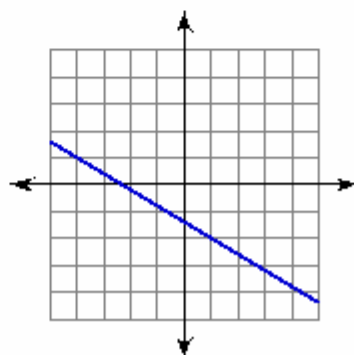
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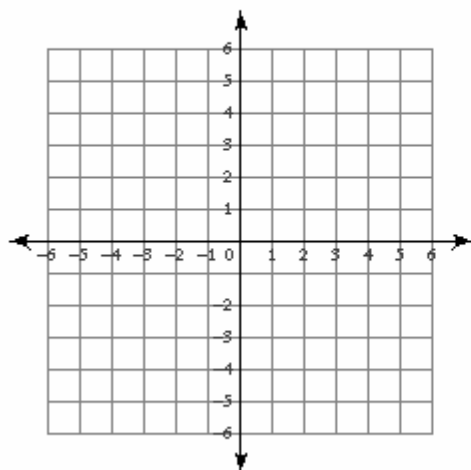


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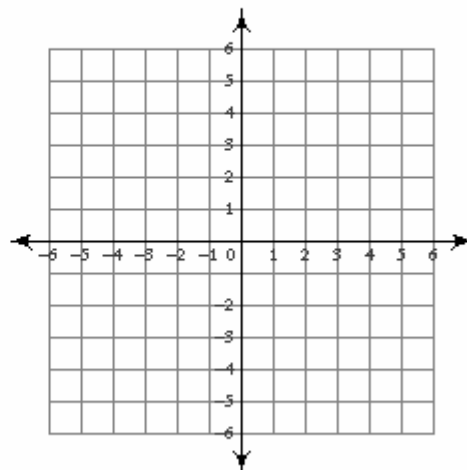


Sketch the graph of each line.

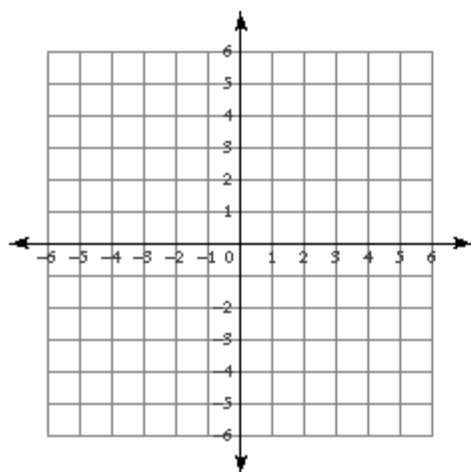
31) x-intercept =  $-2$ , y-intercept =  $5$



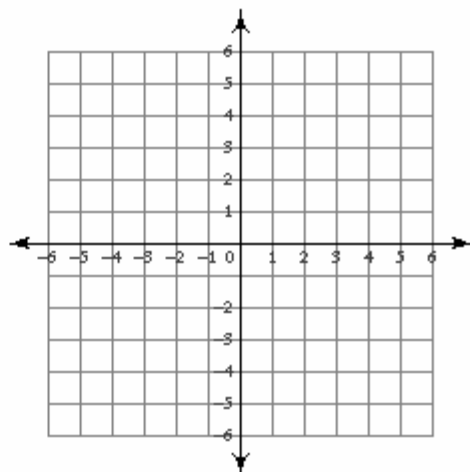
32) x-intercept =  $1$ , y-intercept =  $-4$



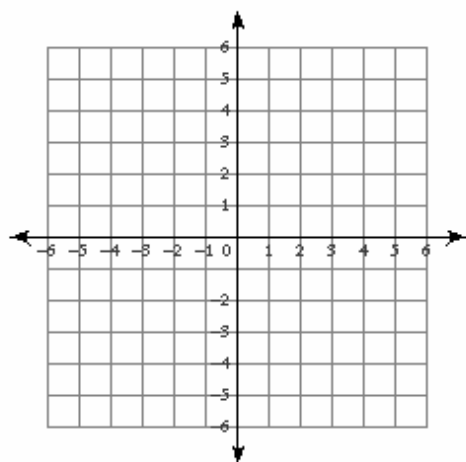
33) x-intercept = -3, y-intercept = -5



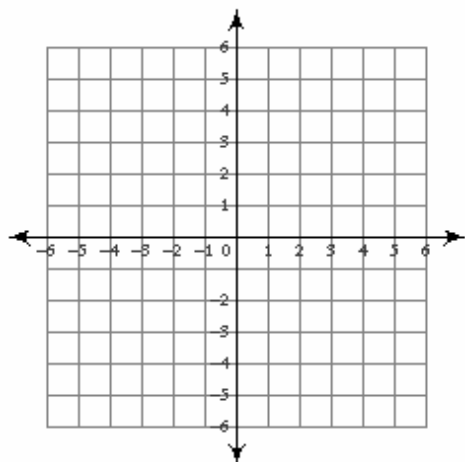
34) x-intercept = 4, y-intercept = -3



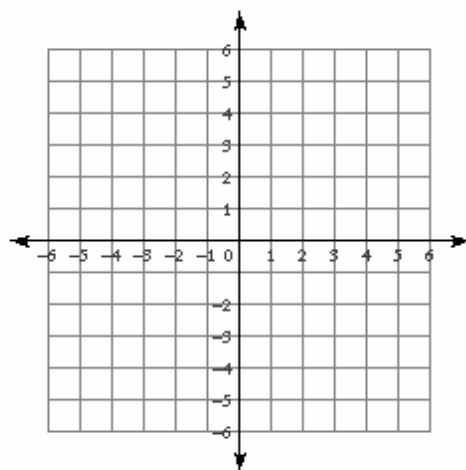
35)  $6x + y = 1$



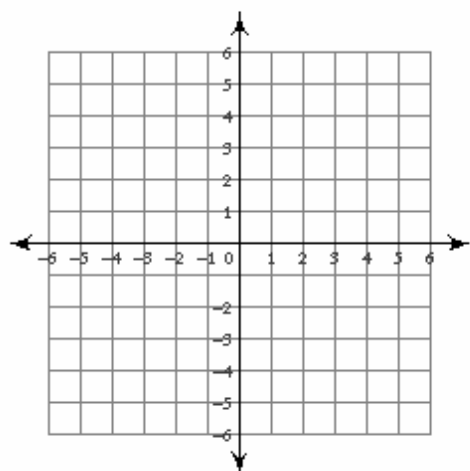
36)  $5x - 2y = -4$



37)  $y = -5x - 5$

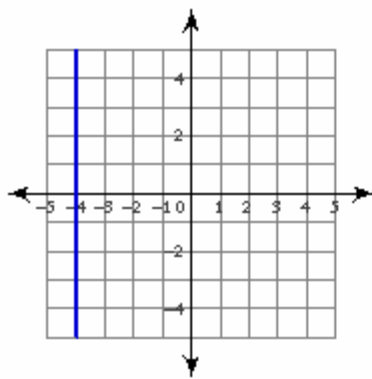


38)  $y = -\frac{8}{5}x + 5$

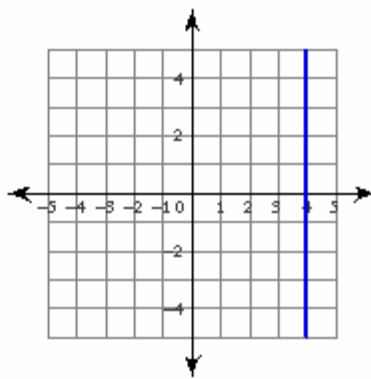


Write the slope-intercept form of the equation of each line.

39)



40)



Write the slope-intercept form of the equation of each line given the slope and y-intercept.

41) Slope = 0, y-intercept = 0

42) Slope =  $\frac{1}{4}$ , y-intercept = 2

Write the slope-intercept form of the equation of each line.

43)  $2x - y = 8$

44)  $x - 7y = -42$

45)  $y + 2 = 5(x + 1)$

46)  $y - 2 = \frac{1}{4}(x + 4)$

Write the slope-intercept form of the equation of the line through the given point with the given slope.

47) through:  $(5, -2)$ , slope =  $-\frac{6}{5}$

48) through:  $(-3, -3)$ , slope =  $\frac{8}{3}$

Write the slope-intercept form of the equation of each line given the slope and y-intercept.

49) Slope = -9, y-intercept = 4

50) Slope =  $\frac{10}{3}$ , y-intercept = 5

Write the slope-intercept form of the equation of the line described.

51) through:  $(-1, -2)$ , parallel to  $y = -x + 3$

52) through:  $(3, 4)$ , parallel to  $y = \frac{8}{3}x - 2$

53) through:  $(-3, -4)$ , perp. to  $y = -3x - 3$

54) through:  $(5, 3)$ , perp. to  $y = -\frac{5}{4}x - 3$

Solve each proportion.

$$55) \frac{k-12}{k+3} = \frac{4}{7}$$

$$56) \frac{x-1}{2} = \frac{x-6}{7}$$

$$57) \frac{x-8}{2} = \frac{x-12}{12}$$

$$58) \frac{n+9}{n-10} = \frac{6}{10}$$

$$59) \frac{2}{m-2} = \frac{5}{m-4}$$

$$60) \frac{8}{p-6} = -\frac{11}{p-5}$$

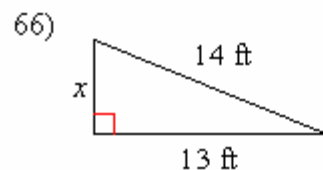
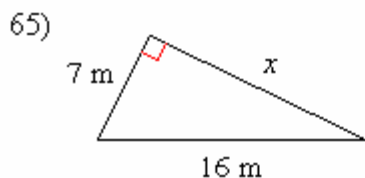
$$61) \frac{x-7}{x+9} = \frac{3}{6}$$

$$62) \frac{n-2}{11} = \frac{n+5}{7}$$

$$63) \frac{6}{b-4} = \frac{11}{b+1}$$

$$64) \frac{6}{r-10} = -\frac{9}{r-5}$$

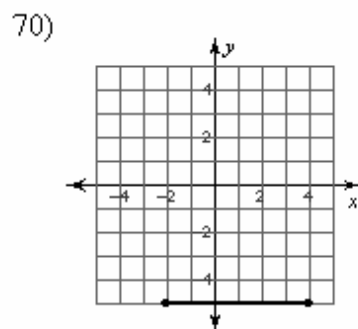
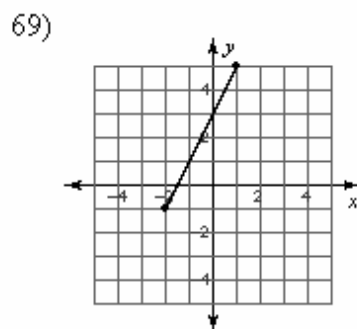
Find the missing side of each triangle. Leave your answers in simplest radical form.



Find the distance between each pair of points. Round your answer to the nearest tenth, if necessary.

67)  $(-4, 0), (-6, -8)$

68)  $(-1, -5), (8, 1)$



Find the midpoint of the line segment with the given endpoints.

71)  $(-5, 5), (-7, 11)$

72)  $(-2, 3), (7, 6)$

73)  $(1, 1), (3, 1)$

74)  $(4, 7), (-1, -3)$

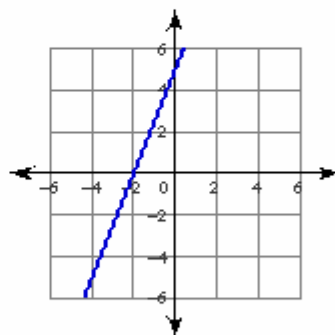
**Find the other endpoint of the line segment with the given endpoint and midpoint.**

75) Endpoint:  $(1, -3)$ , midpoint:  $(5, 5)$

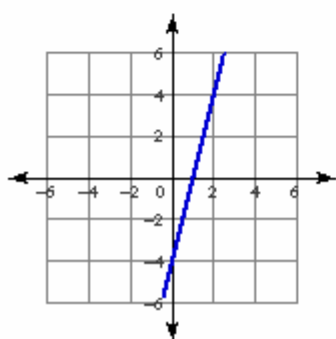
76) Endpoint:  $(4, -5)$ , midpoint:  $(-1, -3)$

## Answers to Summer Review Assignment

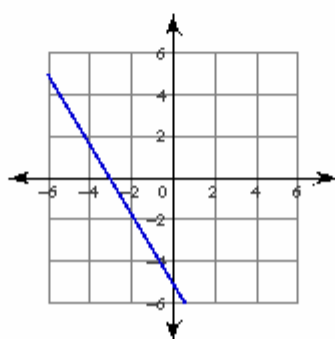
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|--------------------------------|----------------------------|------------------------------|---|
| 1) $\{1\}$                     | 2) $\{-4\}$                | 3) $\{8\}$                   | 4) $\{-2\}$                             |
| 5) $45\sqrt{5}$                | 6) 128                     | 7) 120                       | 8) $16\sqrt{3}$                         |
| 9) $21\sqrt{3}$                | 10) $90\sqrt{2}$           | 11) $-3\sqrt{3} - 5\sqrt{5}$ | 12) $-\sqrt{6} + 9\sqrt{3} + 2\sqrt{2}$ |
| 13) $-12\sqrt{6} - 4\sqrt{5}$  | 14) $-3\sqrt{6}$           | 15) $\sqrt{3} + 3\sqrt{5}$   | 16) $-6\sqrt{3} + 3\sqrt{6}$            |
| 17) $3\sqrt{15} + 5\sqrt{3}$   | 18) $10\sqrt{2} - 30$      | 19) $\sqrt{15} + 5\sqrt{5}$  | 20) $\sqrt{6} + 3\sqrt{2}$              |
| 21) $-8\sqrt{15} - 20\sqrt{6}$ | 22) $\frac{8\sqrt{7}}{7}$  | 23) $\frac{7\sqrt{2}}{8}$    | 24) $\frac{7\sqrt{3}}{3}$               |
| 25) $\frac{\sqrt{15}}{5}$      | 26) $\frac{\sqrt{10}}{10}$ | 27) $-\frac{4}{5}$           | 28) $-\frac{4}{3}$                      |
| 29) -1                         | 30) $-\frac{3}{5}$         | 31)                          |   |



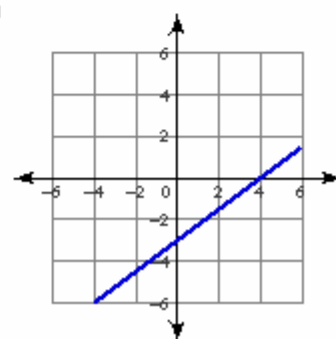
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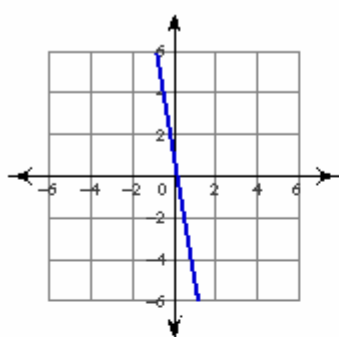
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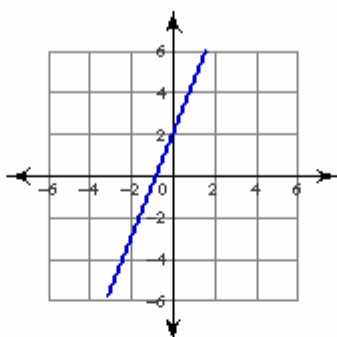
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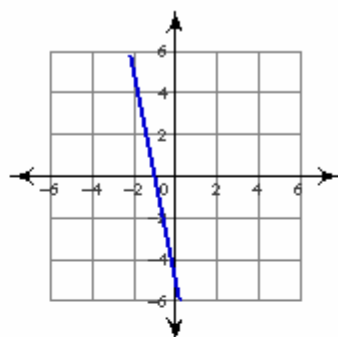
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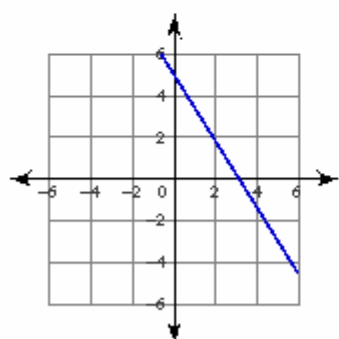
36)



37)



38)



39)  $x = -4$

40)  $x = 4$

41)  $y = 0$

42)  $y = \frac{1}{4}x + 2$

43)  $y = 2x - 8$

44)  $y = \frac{1}{7}x + 6$

45)  $y = 5x + 3$

49)  $y = -9x + 4$

53)  $y = \frac{1}{3}x - 3$

57)  $\left\{\frac{36}{5}\right\}$

61)  $\{23\}$

65)  $3\sqrt{23}$  m

69) 6.7

73)  $(2, 1)$

46)  $y = \frac{1}{4}x + 3$

50)  $y = \frac{10}{3}x + 5$

54)  $y = \frac{4}{5}x - 1$

58)  $\left\{-\frac{75}{2}\right\}$

62)  $\left\{-\frac{69}{4}\right\}$

66)  $3\sqrt{3}$  ft

70) 6

74)  $(1.5, 2)$

47)  $y = -\frac{6}{5}x + 4$

51)  $y = -x - 3$

55)  $\{32\}$

59)  $\left\{\frac{2}{3}\right\}$

63)  $\{10\}$

67) 8.2

71)  $(-6, 8)$

75)  $(9, 13)$

48)  $y = \frac{8}{3}x + 5$

52)  $y = \frac{8}{3}x - 4$

56)  $\{-1\}$

60)  $\left\{\frac{106}{19}\right\}$

64)  $\{8\}$

68) 10.8

72)  $(2.5, 4.5)$

76)  $(-6, -1)$