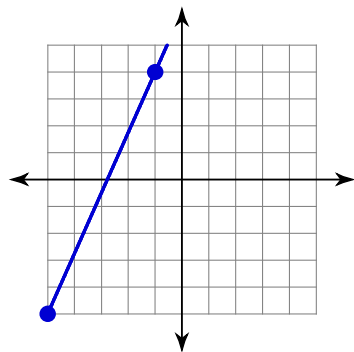


# Review of Linear Functions (Lines)

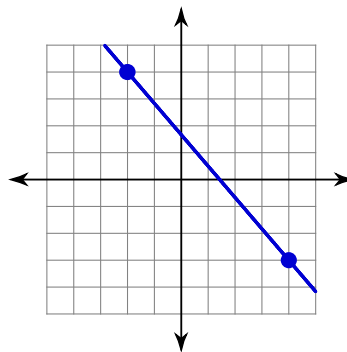
© 2012 Kuta Software LLC. All rights reserved.

**Find the slope of each line.**

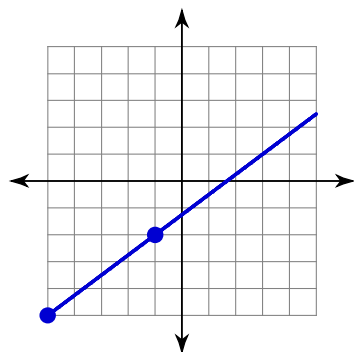
1)



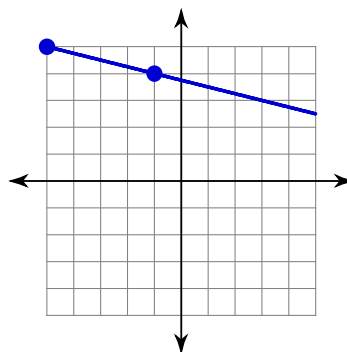
2)



3)



4)



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

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

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

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

**Find the slope of the line through each pair of points.**

9)  $(17, -6), (-11, 7)$

10)  $(3, 4), (-4, -5)$

11)  $(-20, 14), (17, 15)$

12)  $(11, -18), (-1, -7)$

Find the slope of a line parallel to each given line.

13)  $y = \frac{2}{3}x - 2$

14)  $y = \frac{9}{5}x - 5$

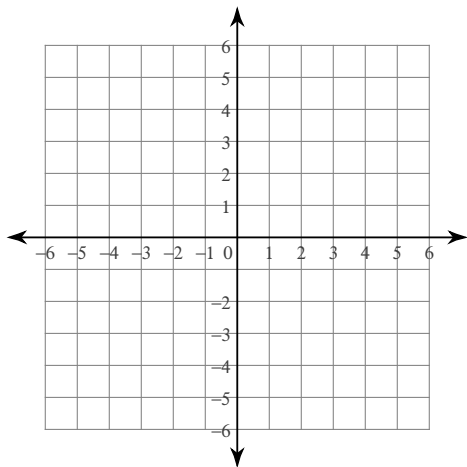
Find the slope of a line perpendicular to each given line.

15)  $y = -\frac{1}{2}x - 2$

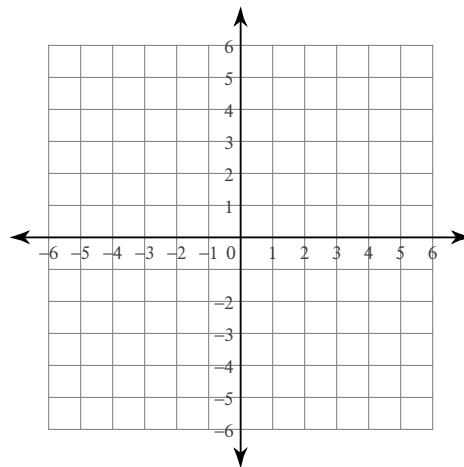
16)  $y = -x - 1$

Sketch the graph of each line.

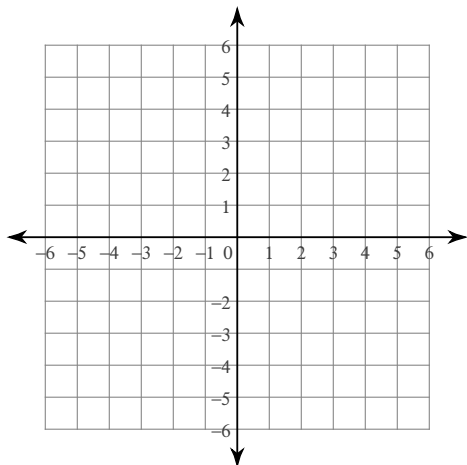
17)  $y = \frac{4}{5}x + 2$



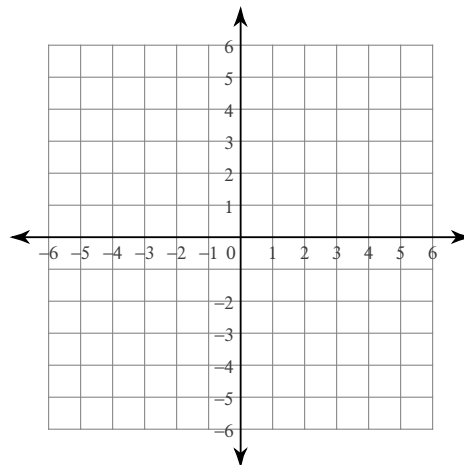
18)  $y = \frac{5}{4}x - 2$



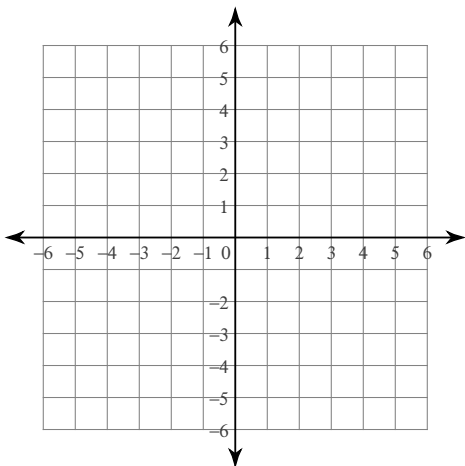
19)  $y = \frac{7}{4}x - 4$



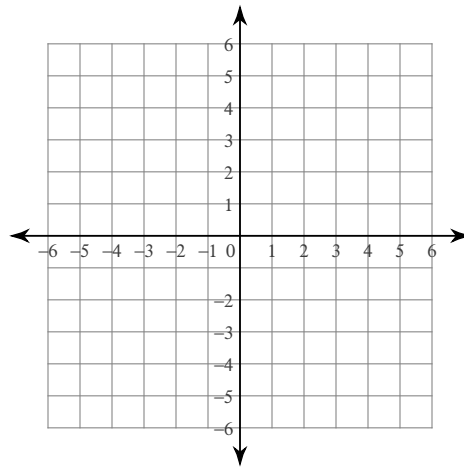
20)  $y = \frac{5}{2}x - 5$



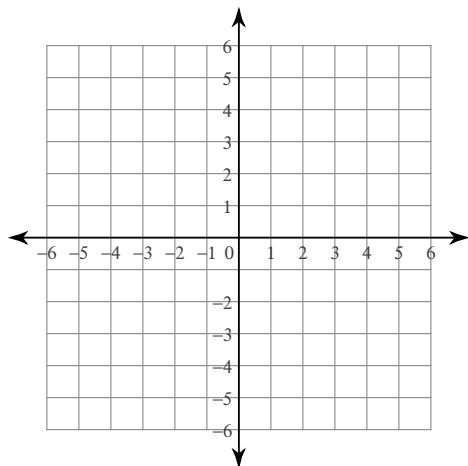
21)  $y = \frac{1}{4}x - 4$



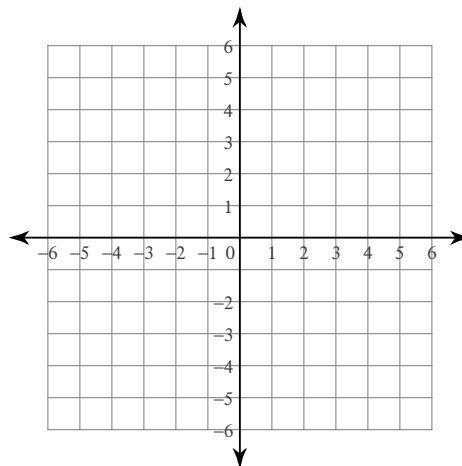
22)  $y = -x + 4$



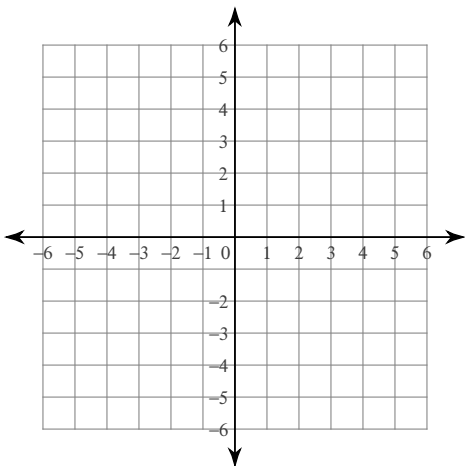
23) x-intercept = -2, y-intercept = -2



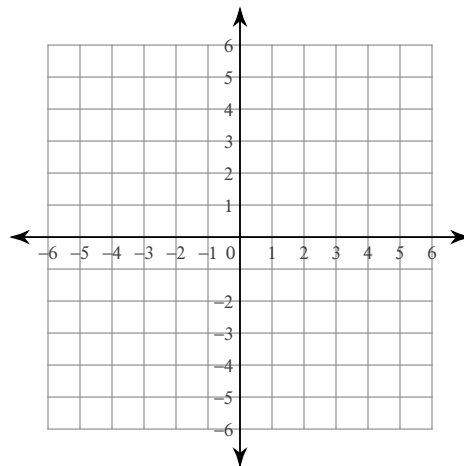
24) x-intercept = 5, y-intercept = 4



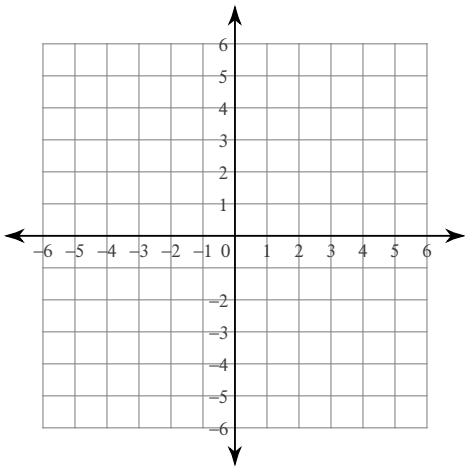
25)  $3x + 4y = -12$



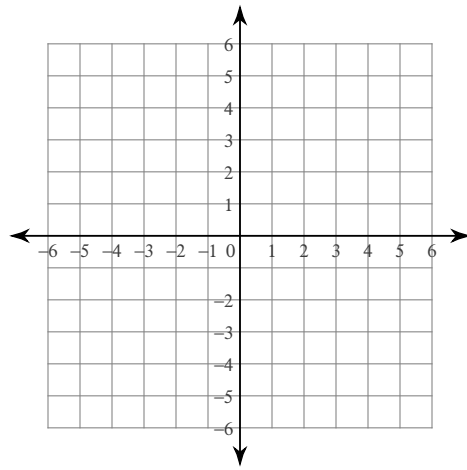
26)  $5x + 3y = -6$



27)  $x + y = -2$

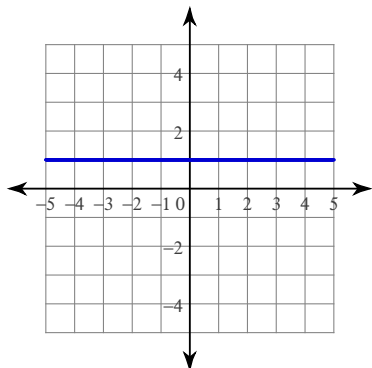


28)  $2x + 5y = -10$

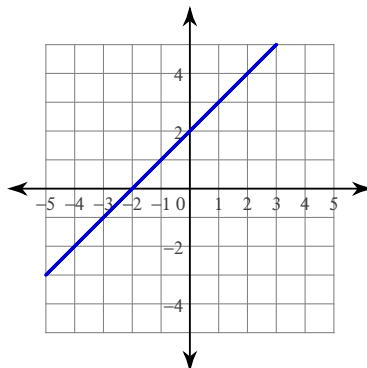


**Write the slope-intercept form of the equation of each line.**

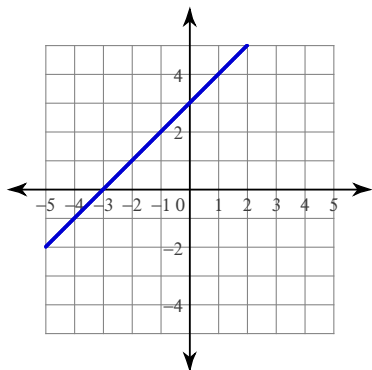
29)



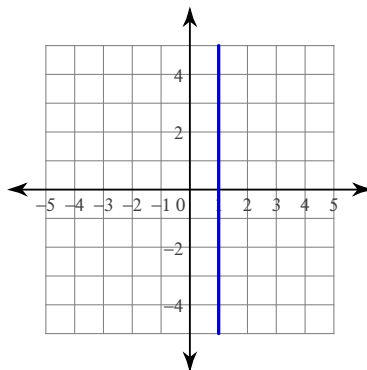
30)



31)



32)



33)  $x - 2y = 7$

34)  $7x + 2y = -28$

35)  $2x + 3y = -6$

36)  $2x + 3y = -7$

37)  $4x + y = 5$

38)  $4x - 3y = 6$

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

39) Slope =  $-10$ , y-intercept =  $-5$

40) Slope =  $-\frac{9}{5}$ , y-intercept =  $-4$

41) Slope =  $-\frac{5}{4}$ , y-intercept =  $5$

42) Slope =  $7$ , y-intercept =  $5$

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

43) Slope =  $-4$ , y-intercept =  $3$

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

45) Slope =  $-\frac{9}{2}$ , y-intercept =  $4$

46) Slope =  $\frac{1}{5}$ , y-intercept =  $-4$

47) Slope =  $\frac{5}{4}$ , y-intercept =  $1$

48) Slope =  $-5$ , y-intercept =  $3$

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

49) through:  $(-1, 1)$ , slope =  $1$

50) through:  $(2, 5)$ , slope =  $2$

51) through:  $(1, -1)$ , slope =  $-\frac{3}{5}$

52) through:  $(5, 1)$ , slope =  $-1$

53) through:  $(-4, 3)$ , slope =  $\frac{1}{4}$

54) through:  $(4, 3)$ , slope =  $\frac{3}{2}$

**Write the slope-intercept form of the equation of the line through the given points.**

55) through:  $(5, 2)$  and  $(0, -5)$

56) through:  $(5, 5)$  and  $(-1, -1)$

57) through:  $(2, 1)$  and  $(4, 3)$

58) through:  $(0, 2)$  and  $(3, 5)$

59) through:  $(1, 0)$  and  $(0, -5)$

60) through:  $(0, 3)$  and  $(-4, 5)$

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

61) through:  $(-5, -3)$ , parallel to  $y = \frac{2}{5}x - 2$

62) through:  $(-1, 2)$ , parallel to  $y = -\frac{3}{2}x - 2$

63) through:  $(-3, -5)$ , parallel to  $y = 2x + 2$

64) through:  $(5, -1)$ , parallel to  $y = -x - 5$

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

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



67) through:  $(-2, -4)$ , perp. to  $y = -\frac{2}{9}x + 4$

68) through:  $(3, -4)$ , perp. to  $y = -7x$

69) through:  $(-2, -4)$ , perp. to  $y = -\frac{1}{2}x$

70) through:  $(4, 5)$ , perp. to  $y = -x + 2$

71) through:  $(-5, 3)$ , perp. to  $y = -5x + 1$

72) through:  $(-1, 1)$ , perp. to  $y = -x - 1$

**Solve each equation.**

73)  $-8x + 4x = -16$

74)  $20 = 4b + 7 + 5$

75)  $18 = 6p + 3p$

76)  $7 = 6k - 7k$

77)  $2v + 7v + 14 = 6v + 2$

78)  $23 - 2m = 3 - 2(5m - 2)$

79)  $-3(5p - 1) - 2(1 + 3p) = 1 - 6p - 4p$

80)  $-\frac{88}{45} = \frac{1}{3}r + \frac{2}{5}r$

81)  $\frac{5}{4} = r + \frac{3}{2} - \frac{1}{2}r$

82)  $9.89 - 2.8x = 4.5x + 0.4$

83)  $-1.476 - 1.6a = 3.6a - 0.28a$

84)  $21.882 + 4.9n = 4.2(1.8n + 3.69)$

85)  $-24.26674 + 0.1x = -1.93(1 - 4.2x)$

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

86)  $x - 6y = -30$

87)  $2x - y = 2$

**Find the slope of each line.**

88)  $4x + 3y = -9$

89)  $3x + y = -1$

90)  $2x + 3y = 15$

91)  $2x + y = 0$

# Answers to Review of Linear Functions (Lines) (ID: 1)

1)  $\frac{9}{4}$

2)  $-\frac{7}{6}$

3)  $\frac{3}{4}$

4)  $-\frac{1}{4}$

5)  $-\frac{5}{4}$

6)  $-\frac{1}{2}$

7)  $-\frac{3}{4}$

8)  $-\frac{5}{3}$

9)  $-\frac{13}{28}$

10)  $\frac{9}{7}$

11)  $\frac{1}{37}$

12)  $-\frac{11}{12}$

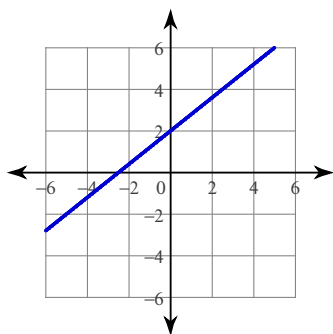
13)  $\frac{2}{3}$

14)  $\frac{9}{5}$

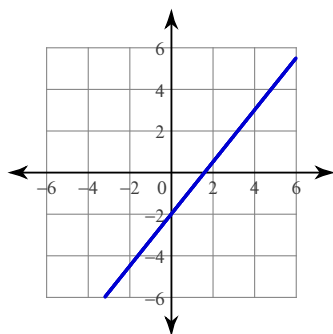
15) 2

16) 1

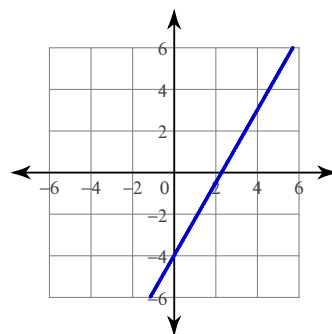
17)



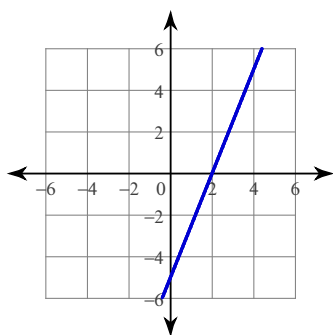
18)



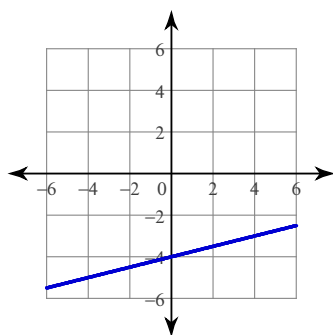
19)



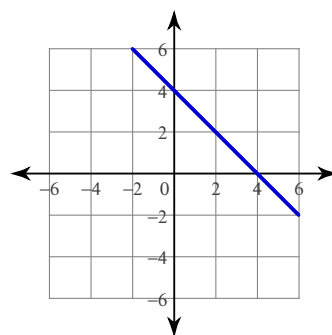
20)



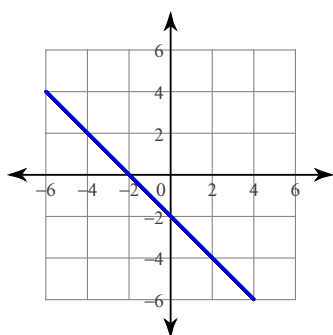
21)



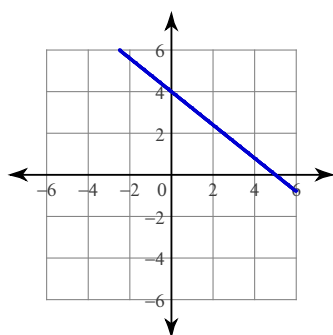
22)



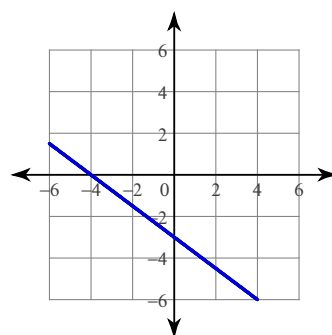
23)



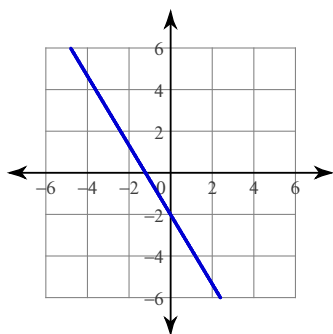
24)



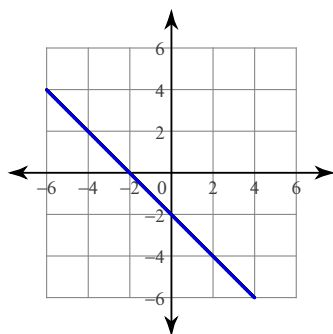
25)



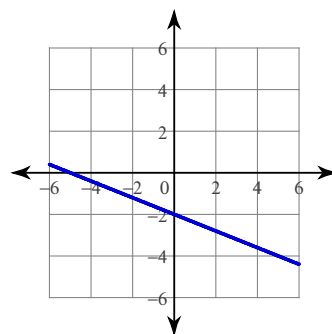
26)



27)



28)



29)  $y = 1$

30)  $y = x + 2$

31)  $y = x + 3$

32)  $x = 1$

33)  $y = \frac{1}{2}x - \frac{7}{2}$

34)  $y = -\frac{7}{2}x - 14$

35)  $y = -\frac{2}{3}x - 2$

36)  $y = -\frac{2}{3}x - \frac{7}{3}$

37)  $y = -4x + 5$

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

39)  $y = -10x - 5$

40)  $y = -\frac{9}{5}x - 4$

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

42)  $y = 7x + 5$

43)  $4x + y = 3$

44)  $x - 2y = 2$

45)  $9x + 2y = 8$

46)  $x - 5y = 20$

47)  $5x - 4y = -4$

48)  $5x + y = 3$

49)  $y = x + 2$

50)  $y = 2x + 1$

51)  $y = -\frac{3}{5}x - \frac{2}{5}$

52)  $y = -x + 6$

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

54)  $y = \frac{3}{2}x - 3$

55)  $y = \frac{7}{5}x - 5$

56)  $y = x$

57)  $y = x - 1$

58)  $y = x + 2$

59)  $y = 5x - 5$

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

61)  $y = \frac{2}{5}x - 1$

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

63)  $y = 2x + 1$

64)  $y = -x + 4$

65)  $y = -3x - 7$

66)  $y = \frac{8}{3}x - \frac{7}{3}$

67)  $y = \frac{9}{2}x + 5$

68)  $y = \frac{1}{7}x - \frac{31}{7}$

69)  $y = 2x$

70)  $y = x + 1$

71)  $y = \frac{1}{5}x + 4$

72)  $y = x + 2$

73)  $\{4\}$

74)  $\{2\}$

75)  $\{2\}$

76)  $\{-7\}$

77)  $\{-4\}$

78)  $\{-2\}$

79)  $\{0\}$

80)  $\left\{-\frac{8}{3}\right\}$

81)  $\left\{-\frac{1}{2}\right\}$

82)  $\{1.3\}$

83)  $\{-0.3\}$

84)  $\{2.4\}$

85)  $\{-2.79\}$

86)  $y = \frac{1}{6}x + 5$

87)  $y = 2x - 2$

88)  $-\frac{4}{3}$

89)  $-3$

90)  $-\frac{2}{3}$

91)  $-2$