Answers for 3.2

For use with pages 164–167

3.2 Skill Practice

1. substitution

2. *Sample answer*: Multiply one or both of the equations by a number so that one of the variables will be eliminated when you add them. After adding, solve the resulting equation for the remaining variable. Substitute the value of the variable found in the previous step into one of the original equations and solve for the other variable.

3. $(6, -1)$ **4.** $(4, 4)$

5. no solution **6.** $\left(-5, \frac{3}{2}\right)$

7. $\left(\frac{4}{3}, 2\right)$ **8.** $(-7, -4)$

9. $(0, 3)$

10. infinitely many solutions

11. $(-3, 8)$ **12.** $\left(\frac{5}{8}, \frac{1}{4}\right)$

13. $(44, -17)$ **14.** $(-10, 6)$

15. $\left(7, \frac{1}{2}\right)$ **16.** $(-4, 0)$

17. $(-6, -2)$

18. infinitely many solutions

19. $\left(-\frac{1}{2}, \frac{1}{6}\right)$ **20.** $\left(\frac{3}{5}, -5\right)$

21. $(-8, 6)$ **22.** $(-1, 9)$

23. no solution **24.** $\left(-\frac{7}{2}, 4\right)$

25. $(7, 3)$ **26.** $\left(\frac{7}{2}, \frac{7}{4}\right)$

27. Failed to multiply the constant by -2.

$$\begin{array}{r} -6x - 4y = -14 \\ 5x + 4y = 15 \\ \hline -x = 1 \\ x = -1 \end{array}$$

28. $(-3, 10)$ **29.** $(-5, -6)$

30. $(9, -4)$

31. infinitely many solutions

32. $(1, 5)$ **33.** $(-8, 0)$

34. $(3, -4)$ **35.** $(7, -6)$

36. no solution **37.** $\left(-\frac{3}{2}, 4\right)$

38. $(-1, -1)$ **39.** $\left(-\frac{3}{4}, \frac{1}{2}\right)$

40. B **41.** $(2, 3)$

42. $(4, 5)$ **43.** $(3, 2)$

44. $(16, 14)$

45. about $(2.90, -2.16)$

46. $(-6, -10)$ **47.** $(-1, 2)$

48. $(5, -2)$ **49.** $(7, 1)$

50. *Sample answer:* $y = -2x + 2$ and $y = \frac{4}{3}x + \frac{16}{3}$

51. $\left(-\frac{1}{9}, 6\right)$ **52.** $\left(-3, -\frac{11}{3}\right)$

53. (5, 4)

54. a. *Sample answer:* $r = -6$, $s = -10$, $t = 9$

b. *Sample answer:* $r = 9$, $s = 15$, $t = -27$

c. *Sample answer:* $r = 2$, $s = -3$, $t = 13$

3.2 Problem Solving

55. 5 acoustic, 4 electric

56. \$4.75

57. The company can fill its orders by operating Factory A for 5 weeks and Factory B for 3 weeks.

58. B

59. 12 double games, 14 singles games

60. a. $d = 4t$

b. $d = 6(t - 2)$

c. 4:00 P.M.

d. Start 1 hour and 40 minutes after Martha; change her speed to $6\frac{2}{3}$ miles per hour; both answers are reasonable; she could change her starting time and she could increase her speed by $\frac{2}{3}$ mile per hour.

61. 80 pounds of peanuts, 20 pounds of cashews

62. plane: 150 mi/h; wind 50 mi/h

63. apprentice: \$100, electrician: \$450

3.2 Mixed Review

64. -5 **65.** -1 **66.** 2

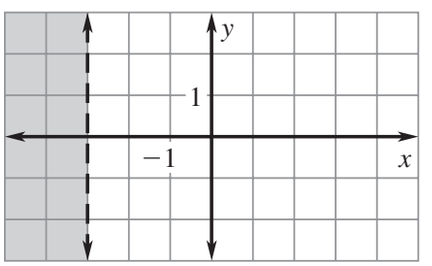
67. $-7, 1$ **68.** $-7, -4$

69. $-6, 20$ **70.** perpendicular

71. neither **72.** $y = -x + 6$

73. $y = 2x - 5$ **74.** $y = \frac{3}{2}x + 1$

75.



Answers for 3.2 *continued*

For use with pages 164–167

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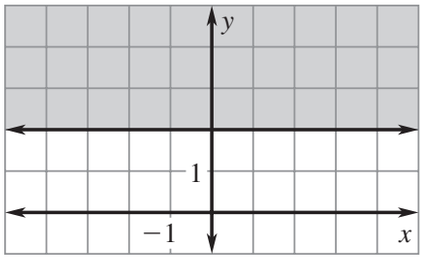

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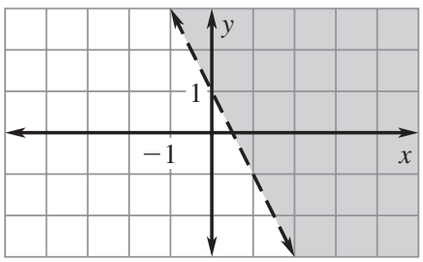

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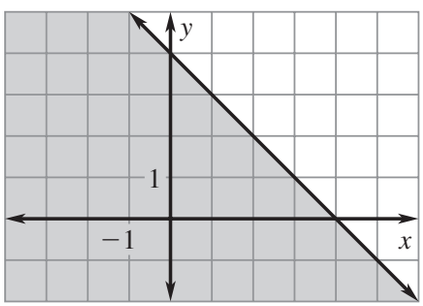

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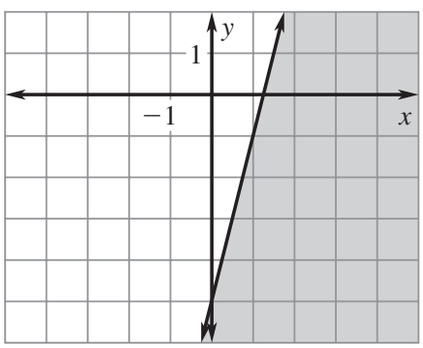

80.