

Section 2.4 Practice Exercises

1. (a) negative

(b) b

3. $\frac{9}{2} > \frac{3}{4}$

5. $0 > -\frac{5}{2}$

7. $\frac{3}{4} > -\frac{5}{2}$

9. $-2 + (-4) = -6$

11. $-7 + 10 = 3$

13. $6 + (-3) = 3$

15. $2 + (-5) = -3$

17. $-19 + 2 = -17$

19. $-4 + 11 = 7$

21. $-16 + (-3) = -19$

23. $-2 + (-21) = -23$

25. $0 + (-5) = -5$

27. $-3 + 0 = -3$

29. $-16 + 16 = 0$

31. $41 + (-41) = 0$

33. $4 + (-9) = -5$

35. $7 + (-2) + (-8) = -3$

37. $-17 + (-3) + 20 = -20 + 20 = 0$

39. $-3 + (-8) + (-12) = -11 + (-12) = -23$

41. $-42 + (3) + 45 + (-6) = -45 + 45 + (-6)$
 $= -6$

43. $-5 + (-3) + (-7) + 4 + 8$
 $= -8 + (-7) + 4 + 8$
 $= -3$

45. $23.81 + (-2.51) = 21.3$

47. $-\frac{2}{7} + \frac{1}{14} = -\frac{4}{14} + \frac{1}{14} = -\frac{3}{14}$

49. $\frac{2}{3} + \left(-\frac{5}{6}\right) = \frac{4}{6} + \left(-\frac{5}{6}\right) = -\frac{1}{6}$

51. $-\frac{7}{8} + \left(-\frac{1}{16}\right) = -\frac{14}{16} + \left(-\frac{1}{16}\right) = -\frac{15}{16}$

53. $-\frac{1}{4} + \frac{3}{10} = -\frac{5}{20} + \frac{6}{20} = \frac{1}{20}$

55. $-2.1 + \left(-\frac{3}{10}\right) = -2.1 + -0.3$
 $= -2.4$ or $-\frac{12}{5}$

57. $\frac{3}{4} + (-0.5) = 0.75 + (-0.5) = 0.25$ or $\frac{1}{4}$

59. $8.23 + (-8.23) = 0$

61. $-\frac{7}{8} + 0 = -\frac{7}{8}$

63. $-\frac{3}{2} + \left(-\frac{1}{3}\right) + \frac{5}{6} = -\frac{9}{6} + \left(-\frac{2}{6}\right) + \frac{5}{6}$
 $= -\frac{6}{6} = -1$

65. $-\frac{2}{3} + \left(-\frac{1}{9}\right) + 2 = -\frac{6}{9} + \left(-\frac{1}{9}\right) + \frac{18}{9}$
 $= \frac{11}{9}$

67. $-47.36 + 24.28 = -23.08$

69. $-0.000617 + (-0.0015) = -0.002117$

71. To add two numbers with different signs, subtract the smaller absolute value from the larger absolute value and apply the sign of the number with the larger absolute value.

73. $x + y + \sqrt{z} = -3 + (-2) + \sqrt{16}$
 $= -5 + 4$
 $= -1$

75. $y + 3\sqrt{z} = -2 + 3\sqrt{16}$
 $= -2 + 3 \cdot 4$
 $= -2 + 12$
 $= 10$

77. $|x| + |y| = |-3| + |-2|$
 $= 3 + 2 = 5$

79. $-x + y = -(-3) + (-2)$
 $= 3 + (-2)$
 $= 1$

81. $-6 + (-10); -16$

83. $-3 + 8; 5$

85. $-21 + 17; -4$

87. $3(-14 + 20); 18$

89. $(-7 + (-2)) + 5; -4$

91. $-5 + 13 + (-11); -3^{\circ}\text{F}$

93. $-8 + 1 + 2 + (-5) = -10$; Amara lost 10
lb.

95. (a) $52. 23 + (-52. 95) = -\$0. 72$

(b) Yes

97. $-5 + 0 + (-1) + (-1) + 1 = -6$; She was 6
below par.