

Section 2.2 Calculator Exercises

1. ≈ 3.464101615

3. ≈ 12.56637061

Section 2.2 Practice Exercises

1. (a) variable

(b) constants

(c) set

(d) inequalities

(e) a is less than b (f) c is greater than or equal to d

(g) 5 is not equal to 6

(h) opposites

(i) $|a|$; 0

3. $4\frac{1}{2} \times 1\frac{5}{6} = \frac{9^3}{2} \times \frac{11}{6_2} = \frac{33}{4}$ or $8\frac{1}{4}$

5. $y - 3 = 18 - 3 = 15$

7. $\frac{15}{t} = \frac{15}{5} = 3$

9. $6d = 6\left(\frac{2}{3}\right) = \frac{6 \times 2}{3} = \frac{12}{3} = 4$

11. $c - 2 - d = 15.4 - 2 - 8.1 = 5.3$

13. $abc = \frac{1}{10} \times \frac{1}{4} \times \frac{1}{2} = \frac{1 \times 1 \times 1}{10 \times 4 \times 2} = \frac{1}{80}$

15. (a) $1.29s = 1.29(3) = 3.87$, \$3.87

(b) $1.29s = 1.29(8) = 10.32$, \$10.32

(c) $1.29s = 1.29(10) = 12.90$, \$12.90

17. (a) $850 - b = 850 - 475 = 375$,

375 calories

(b) $850 - b = 850 - 220 = 630$,

630 calories

(c) $850 - b = 850 - 580 = 270$,

270 calories



21. a. a terminating decimal; rational number

23. b. repeating decimal; rational number

25. a. a terminating decimal; rational number

27. c. a nonterminating, nonrepeating decimal; irrational number

29. a. a terminating decimal; rational number
31. a. a terminating decimal; rational number
33. b. a repeating decimal; rational number
35. c. a nonterminating, nonrepeating decimal; irrational number
37. Answers vary; for example: π , $-\sqrt{2}$, $\sqrt{3}$
39. Answers vary; for example: -4 , -1 , 0
41. Answers vary; for example: $-\frac{3}{4}$, $\frac{1}{2}$, 0.206
43. $-\frac{3}{2}$, -4 , $0.\bar{6}$, 0 , 1
45. 1
47. -4 , 0 , 1
49. (a) Since Kane's score is 0 and Pak's score is -8 , $0 > -8$.
 (b) Since Scorenjam's score is 7 and Davies' score is -4 , $7 > -4$.
 (c) Since Pak's score is -8 and McCurdy's score is 3 , $-8 < 3$.
 (d) Since Kane's score is 0 and Davies' score is -4 , $0 > -4$.
51. -18
53. 6.1
55. $\frac{5}{8}$
57. $-\frac{7}{3}$
59. 3
61. $-\frac{7}{3}$
63. 8
65. -72.1
67. 2
69. 1.5
71. -1.5
73. $\frac{3}{2}$
75. -10
77. $-\frac{1}{2}$
79. False; $|n|$ is never negative.
81. True; 5 is to the right of 2 .
83. False; 6 is equal to 6 .
85. True; -7 is equal to -7 .
87. False; $\frac{3}{2}$ is to the right of $\frac{1}{6}$.
89. False; -5 is to the left of -2 .
91. False; 8 is equal to 8 .
93. True; 2 is to the right of 1 .
95. True; $\frac{1}{9}$ is equal to $\frac{1}{9}$.
97. False; 7 is equal to 7 .
99. True; -1 is to the left of 1 .
101. True; 8 is equal to 8 .
103. True; 2 is equal to 2 .
105. For all $a < 0$ since $-a$ is the opposite of a