

Chapter 5 Support File Answers

Practice 5-1

1. < 2. < 3. > 4. = 5. < 6. > 7. >
8. > 9. = 10. > 11. < 12. = 13. >
14. > 15. < 16. 21 17. 96 18. 150
19. $18a^3bc$ 20. $84x^2y^2$ 21. 144 22. 432
23. down; $3\frac{5}{8} > 3\frac{1}{2}$ 24. yes; $2\frac{2}{3} < 2\frac{3}{4}$ 25. $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}$
26. $\frac{1}{3}, \frac{2}{5}, \frac{3}{7}, \frac{4}{9}$ 27. $\frac{8}{11}, \frac{3}{4}, \frac{7}{8}, \frac{9}{10}$

Practice 5-2

1. $\frac{2}{5}$ 2. $\frac{3}{4}$ 3. $\frac{4}{25}$ 4. $2\frac{17}{50}$ 5. $\frac{9}{100}$ 6. $8\frac{4}{5}$
7. 0.85 8. 0.875 9. -0.5625 10. 3.125
11. 6.28125 12. 2.696 13. 0.52 14. 4.62
15. -0.583 16. $0.\overline{4}$ 17. $0.2\overline{7}$ 18. $1.\overline{36}$
19. $\frac{3}{10}, 0.4, \frac{1}{2}, \frac{3}{5}$ 20. $-\frac{3}{4}, -0.6, -0.38, -\frac{3}{8}$
21. $-\frac{1}{5}, 0.2, \frac{1}{4}, \frac{2}{5}$ 22. $\frac{97}{5} = 19\frac{2}{5} = 19.4$ 23. $10\frac{7}{90}$
24. $3\frac{11}{25}$ 25. $-4\frac{3}{11}$ 26. $\frac{9}{100}$ 27. $\frac{3}{8}$ 28. $\frac{241}{990}$
29. > 30. < 31. = 32. < 33. = 34. >

Practice 5-3

1. $\frac{5}{6}$ 2. $\frac{3}{8}$ 3. $1\frac{2}{7}$ 4. $-1\frac{3}{10}$ 5. $-\frac{1}{12}$ 6. $9\frac{7}{24}$
7. $\frac{8x}{15}$ 8. $\frac{7n}{30}$ 9. $\frac{1}{3}$ 10. $5\frac{3}{5}$ 11. $\frac{1}{2}$ 12. $\frac{4}{5y}$
13. $1\frac{5}{16}$ 14. $-\frac{13}{20}$ 15. $6\frac{7}{12}$ 16. $-3\frac{11}{12}$
17. $6\frac{7}{8}$ 18. 11 19. $14\frac{15}{16}$ 20. $11\frac{1}{5}$ 21. 11
22. 30 23. 56 24. 100 25. $-\frac{23}{150}$ 26. $\frac{61}{126}$
27. $\frac{15}{28}$ 28. $\frac{20}{33}$ 29. $6\frac{24}{65}$ 30. $\frac{23}{36}$

Practice 5-4

1. $\frac{4}{5}$ 2. $-\frac{5}{14}$ 3. $\frac{7}{16}$ 4. 1 5. 10 6. $2\frac{1}{2}$ 7. $4\frac{1}{2}$
8. $3\frac{1}{3}$ 9. $\frac{2}{5}$ 10. $-\frac{2}{3}$ 11. $\frac{6}{35}$ 12. $\frac{1}{3}$ 13. $\frac{14}{39}$
14. $-1\frac{1}{12}$ 15. $24\frac{1}{9}$ 16. $-1\frac{2}{15}$ 17. $29\frac{1}{4}$ 18. $\frac{3x}{14}$
19. $\frac{3}{8}$ 20. $\frac{27t}{68}$ 21. $8\frac{1}{4}$ cups 22. $4\frac{1}{8}$ chapters
23. 15 sheets

Practice 5-5

1. 10 2. 9 3. 20 4. 1200 5. $2\frac{1}{2}$ 6. $2\frac{1}{2}$
7. $1\frac{1}{4}$ 8. 5 9. 18 10. $1\frac{1}{2}$ 11. A glass of milk holds about 8 fl oz. 12. A newborn weighs about $7\frac{1}{2}$ lb. 13. Reasonable 14. ton; A whale is very heavy. 15. cup; Cookies have about a cup of sugar. 16. inch; A mouse is small 17. capacity 18. length 19. weight 20. length

Practice 5-6

1. March 5 2. 9 records per hour 3. page 198
4. -56°F 5.a. 7 b. 31 c. 5 d. -3 e. 17

Practice 5-7

1. $-1\frac{9}{10}$ 2. $1\frac{3}{20}$ 3. $\frac{14}{15}$ 4. $4\frac{1}{2}$ 5. $\frac{1}{4}$ 6. $\frac{4}{5}$
7. $3\frac{5}{9}$ 8. $\frac{5}{24}$ 9. $-\frac{5}{9}$ 10. $-\frac{3}{16}$ 11. $11\frac{1}{3}$ 12. $7\frac{1}{6}$
13. $5\frac{3}{8}$ 14. $14\frac{1}{12}$ 15. $-\frac{7}{10}$ 16. $\frac{7}{12}$ 17. $7\frac{3}{4}$
18. $4\frac{11}{12}$ 19. $\frac{2}{7}$ 20. $\frac{7}{9}$ 21. $\frac{2}{9}$ 22. $\frac{2}{5}$
23. $h + 3\frac{7}{12} = 21\frac{1}{6}$; $h = 17\frac{7}{12}$ ft
24. $h + 1\frac{3}{4} = 6\frac{1}{4}$; $h = 4\frac{1}{2}$ ft

Practice 5-8

1. $x = \frac{3}{4}$ 2. $p = -\frac{3}{4}$ 3. $k = -1\frac{1}{3}$ 4. $h = \frac{4}{5}$
5. $e = \frac{1}{48}$ 6. $m = -4\frac{2}{3}$ 7. $p = -\frac{2}{9}$
8. $w = 1\frac{1}{11}$ 9. $x = 0$ 10. $m = 3\frac{1}{3}$ 11. $c = \frac{2}{15}$
12. $k = -\frac{1}{10}$ 13. $y = 7$ 14. $f = \frac{8}{15}$
15. $n = \frac{1}{5}$ 16. $c = 1\frac{1}{3}$ 17. $d = 6$ 18. $y = 20$
19. $h = -\frac{1}{8}$ 20. $k = -1\frac{2}{3}$ 21. $1\frac{2}{3}m = 22\frac{1}{2}$;
 $m = 13\frac{1}{2}$ pages 22. $3x = 156$; $x = 52$ mi/h

Practice 5-9

1. $\frac{25}{36}$ 2. $\frac{16}{81}$ 3. $\frac{x^6}{125}$ 4. $8x^3$ 5. $9y^4$ 6. $125a^3b^6$
7. $144m^2n^2$ 8. $-1,000x^3y^9$ 9. $729q^3r^3s^{12}$
10. $\frac{4x^2}{81y^2}$ 11. $-a^6b^6$ 12. $16a^{12}b^8$ 13. $\frac{4x^2}{y^2}$
14. $\frac{9x^2}{64y^2}$ 15. $\frac{27y^6}{x^3}$ 16. $\frac{32x^5}{y^{10}}$ 17. 64 18. -2
19. -1 20. 16 21. $\frac{4}{9}$ 22. -1 23. 5 24. 4
25. 3 26. 2 27. $(4a^2)^2 = 16a^4$
28. $(3z^5)^3 = 27z^{15}$

Reteaching 5-1

1. $\frac{4}{18} > \frac{3}{18}$ 2. $\frac{5}{8} < \frac{6}{8}$ 3. $-\frac{4}{6} > -\frac{5}{6}$
4. $-\frac{5}{18} < -\frac{4}{18}$ 5. $\frac{21}{36} < \frac{22}{36}$ 6. $\frac{39}{60} < \frac{44}{60}$
7. $-\frac{22}{40} = -\frac{22}{40}$ 8. $\frac{6}{25} > \frac{5}{25}$ 9. $\frac{15}{28} < \frac{16}{28}$
10. $\frac{35}{63} > \frac{33}{63}$ 11. $\frac{15}{51} = \frac{15}{51}$ 12. $-\frac{25}{60} > -\frac{26}{60}$

Reteaching 5-2

1. 0.636363 ..., 63.6363 ..., -0.636363 ..., $63\frac{63}{99}$, $\frac{7}{11}$
2. 0.83333 ..., 83.3333 ..., -8.3333 ..., $75\frac{75}{90}$

Chapter 5 Support File Answers (continued)

5. $\frac{5}{6}$ 3. $1\frac{13}{18}$ 4. $\frac{19}{33}$ 5. $4\frac{10}{11}$ 6. $2\frac{4}{15}$

Reteaching 5-3

1. $2\frac{8}{10} - 1\frac{1}{10} = 1\frac{7}{10}$ 2. $4\frac{8}{12} - 2\frac{11}{12} = 3\frac{20}{12} - 2\frac{11}{12} = 1\frac{9}{12} = 1\frac{3}{4}$ 3. $5\frac{2}{18} - 2\frac{15}{18} = 4\frac{20}{18} - 2\frac{15}{18} = 2\frac{5}{18}$
4. $7\frac{4}{30} - 1\frac{21}{30} = 6\frac{34}{30} - 1\frac{21}{30} = 5\frac{13}{30}$ 5. $1\frac{7}{18}$ 6. $3\frac{14}{15}$

7. $3\frac{19}{42}$ 8. $\frac{23}{36}$ 9. $5\frac{5}{14}$ 10. $\frac{11}{24}$ 11. $\frac{34}{45}$ 12. $1\frac{3}{4}$
13. $\frac{1}{4}$ 14. $-\frac{4}{9}$

Reteaching 5-4

1. $\frac{1}{3}$ 2. $-2\frac{2}{5}$ 3. $-10\frac{1}{3}$ 4. 24 5. $-1\frac{1}{2}$ 6. $\frac{1}{2}$
7. $2\frac{2}{5}$ 8. $-2\frac{5}{8}$

Reteaching 5-5

1. $1\frac{1}{2}$ 2. $3\frac{1}{2}$ 3. $1\frac{1}{4}$ 4. $2\frac{1}{2}$ 5. 25 6. 38 7. 10
8. 5 9. 4,800 10. $3\frac{3}{4}$ 11. $2\frac{7}{8}$ 12. $2\frac{1}{4}$

Reteaching 5-6

1.a. \$3 b. \$4 c. \$8 d. \$15 2. \$44 3. $\frac{1}{8}$ of the pie

Reteaching 5-7

1. $h = \frac{1}{8}$ 2. $e = \frac{1}{2}$ 3. $m = -\frac{13}{16}$ 4. $p = 7$
5. $x = 1\frac{7}{18}$ 6. $y = -\frac{1}{16}$ 7. $k = -3\frac{3}{4}$
8. $n = 1\frac{7}{10}$ 9. $f = -2\frac{1}{24}$ 10. $b = 2\frac{34}{35}$

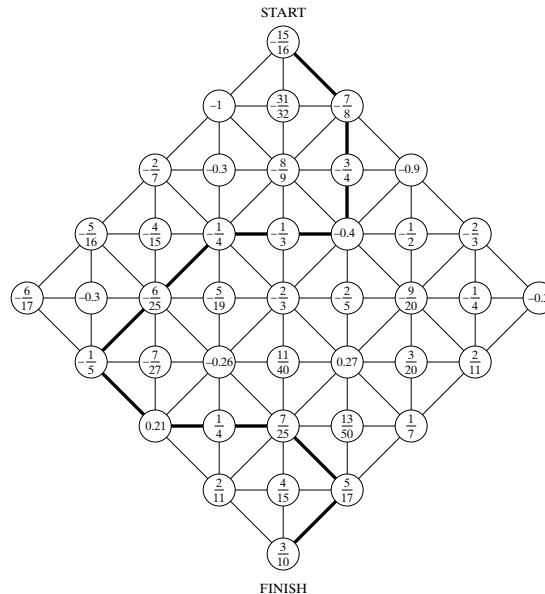
Reteaching 5-8

1. $x = 1\frac{1}{2}$ 2. $x = 1\frac{1}{2}$ 3. $y = \frac{5}{12}$ 4. $h = -\frac{2}{11}$
5. $j = 6$ 6. $p = 2\frac{7}{8}$ 7. $m = \frac{3}{5}$ 8. $n = -4\frac{4}{5}$
9. $x = 1\frac{1}{4}$ 10. $k = -2\frac{1}{2}$

Reteaching 5-9

1. 10,000 2. -216 3. $16x^2$ 4. $a^{10}b^5$
5. $9a^2b^6$ 6. $-125m^6n^9$ 7. $\frac{4}{81}$ 8. $\frac{49}{64}$ 9. $-\frac{27}{1,000}$
10. $\frac{16}{x^8}$ 11. $\frac{27x^3}{125}$ 12. $\frac{a^8}{b^{20}}$ 13. $\frac{x^5y^{10}}{32z^{15}}$
14. $\frac{1}{16n^{12}}$ 15. $\frac{4r^6s^2}{9t^4}$ 16. $-\frac{27}{a^6b^3c^6}$ 17. $p^{12}q^9r^6$
18. $\frac{x^8y^4z^{12}}{16}$ 19. $\frac{25}{j^6k^2}$ 20. $\frac{a^3c^{12}}{64b^3}$

Enrichment 5-1



Enrichment 5-2

1. $0.9\overline{4}$ 2. $0.2\overline{7}$ 3. $0.25\overline{4}$ 4. $0.2\overline{4}$ 5. $0.\overline{4}$
6. $7.13\overline{8}$ 7. $0.\overline{4}$ 8. $0.\overline{7}$ 9. $0.\overline{2}$ 10. $0.\overline{5}$
11. $0.\overline{8}$ 12. $0.\overline{8}$ 13. $0.3\overline{7}$ 14. $0.8\overline{2}$ 15. $0.0\overline{5}$
16. $0.6\overline{1}$ 17. $0.4\overline{7}$ 18. $0.4\overline{7}$ 19. $0.5\overline{71}$
20. $0.00\overline{7}$ 21. $0.36\overline{5}$ 22. $0.99\overline{8}$ 23. $0.1\overline{35}$
24. $0.1\overline{35}$ 25. $0.0870\overline{5}$

Enrichment 5-3

Sample answers are shown. 1. $\frac{1}{2} + \frac{1}{6} + \frac{1}{21}$
2. $\frac{1}{2} + \frac{1}{6}, \frac{1}{3} + \frac{1}{4} + \frac{1}{12}$ 3. $\frac{1}{3} + \frac{1}{6}, \frac{1}{4} + \frac{1}{8} + \frac{1}{12} + \frac{1}{24}$
4. $\frac{1}{2} + \frac{1}{4} + \frac{1}{8}, \frac{1}{2} + \frac{1}{3} + \frac{1}{24}$ 5. $\frac{1}{4} + \frac{1}{9} + \frac{1}{18}, \frac{1}{3} + \frac{1}{12}$
6. $\frac{1}{3} + \frac{1}{4}, \frac{1}{2} + \frac{1}{12}$

Enrichment 5-4

1. $\frac{3}{5}$ 2. $\frac{13}{45}$ 3. $\frac{12}{29}$ 4. $\frac{350}{1,807}$ 5. $\frac{1}{5} + \frac{1}{6}$ 6. $\frac{1}{8} + \frac{1}{5}$
7. $\frac{1}{4 + \frac{1}{2 + \frac{1}{3}}}$ 8. $\frac{1}{6 + \frac{1}{2 + \frac{1}{5}}}$

Enrichment 5-5

1. $23\frac{1}{4}, 38\frac{1}{3}, 33\frac{1}{3}, 25\frac{1}{3}, 36\frac{1}{2}, 109\frac{2}{3}, 72\frac{1}{4}, 104\frac{1}{3}, 83\frac{1}{6}, 91\frac{2}{3}, 15\frac{2}{3}, 49\frac{1}{3}, 17\frac{3}{4}, 23, 19\frac{5}{12}, 29, 36\frac{5}{6}, 77\frac{1}{3}, 31\frac{1}{6}, 26\frac{1}{3}$
2. Sample answer: The larger units are more appropriate, but the people at American Forests probably wanted to avoid fractions.

Chapter 5 Support File Answers (continued)

Enrichment 5-6

1. $1\frac{7}{16}$ 2. $1\frac{5}{8}$ 3. $\frac{3}{16}$ 4. $\frac{7}{16}$ 5. $\frac{3}{16}$ 6. $\frac{7}{8}$ 7. $\frac{5}{16}$
and $\frac{3}{8}$ b. $1\frac{1}{2}$ and $1\frac{9}{16}$ c. $1\frac{15}{16}$ and 2 d. $\frac{13}{16}$ and $\frac{7}{8}$
8. $1\frac{23}{32}$ 9. $\frac{5}{32}$ 10. $\frac{15}{32}$ 11. $\frac{9}{32}$ 12. $1\frac{9}{32}$ 13. $\frac{1}{32}$

Enrichment 5-7

1. $h + 6,194 = 29,028$; $h = 22,834$ ft 2. $-\frac{5}{24}$
3. $1\frac{5}{14}$ 4. $1\frac{1}{15}$ 5. $-\frac{5}{14}$ 6. $-3\frac{5}{6}$ 7. $\frac{5}{8}$ 8. $-\frac{13}{40}$
9. $-1\frac{13}{20}$ 10. $-2\frac{17}{18}$ 11. $10\frac{3}{20}$ 12. $1\frac{11}{24}$ 13. $\frac{25}{42}$
14. $-1\frac{1}{7}$ 15. $\frac{7}{48}$

ACONCAGUA ARGENTINA

Enrichment 5-8

1. $\frac{1}{2}$ s, $\frac{1}{2}$ s, 1 s, 2 s 2. $\frac{1}{4}$ s, $\frac{1}{4}$ s, $\frac{1}{8}$ s, $\frac{1}{8}$ s, $\frac{1}{8}$ s, $\frac{1}{8}$ s, 1 s, 2 s
3.a. $\frac{3}{4}$ s b. 3 s 4. $\frac{1}{4}$ s, $\frac{1}{2}$ s, $\frac{3}{8}$ s, $1\frac{1}{2}$ s, $\frac{3}{32}$ s, $\frac{3}{4}$ s

Enrichment 5-9

- 1.a. 64 b. 64 c. $4^3 = 2^6$ 2.a. 6,561
b. 6,561 c. $9^4 = 3^8$ 3. $4^3 = (2^2)^3 = 2^6$
4. $9^4 = (3^2)^4 = 3^8$ 5. 2^{11} 6. 3^{10} 7. 2^{12}
8. 6^7 9. 3^{13} 10. 2^{18} 11. 2^{22} 12. 5^{10}
13. 2^{29} 14. 3^{18} 15. 7^{13} 16. 10^{17} 17. 3^{41}
18. 2^{49}

Checkpoint 1

1. 112 2. 200 3. 77 4. > 5. < 6. >
7. 1.6 8. $\frac{2}{3}$ 9. $0.2\bar{7}$ 10. D

Checkpoint 2

1. $-\frac{5}{14}$ 2. 6 3. $7\frac{1}{2}$ 4. 7,500 5. $1\frac{1}{4}$ ft 6.
 $y = \frac{1}{4}$ 7. $t = 2\frac{1}{2}$ 8. $x = -1\frac{1}{5}$ 9. $k = \frac{8}{11}$ 10.
11 ft from the center line

Assessment Form A

1. D 2. G 3. A 4. F 5. D 6. G 7. C
8. H 9. D 10. G 11. < 12. = 13. $\frac{5}{11}$
14. $0.58\bar{3}$ 15. $x = -\frac{13}{14}$ 16. $t = 12\frac{1}{8}$
17. $n = -\frac{11}{24}$ 18. $1\frac{1}{4}$ 19. 26 20. $16x^2$
21. $\frac{27m^3}{8n^3}$ 22. $-x^3y^6$ 23. $\frac{2}{3}c = 54$; $c = 81$ coins
24. 20 puppies 25. Sample answer: A baby lost
 $\frac{3}{4}$ lb in the week after it was born. At the end of

the week it weighed $6\frac{3}{4}$ lb. What was its birth weight?

Assessment Form B

1. A 2. F 3. C 4. H 5. C 6. G 7. D
8. F 9. B 10. J 11. > 12. > 13. $\frac{8}{9}$
14. $0.4\bar{6}$ 15. $x = \frac{7}{15}$ 16. $y = 1\frac{1}{4}$ 17. $z = -5\frac{1}{2}$
18. $\frac{3}{4}$ 19. 6 20. $-125x^3$ 21. $\frac{49m^2}{81n^2}$
22. $-x^{10}y^5$ 23. $1\frac{3}{10}m = 195$; $m = 150$ months
24. 12 25. Sample answer: Thomas runs $\frac{3}{4}$ mi a day. How many days will it take him to run a total of 6 mi?

Alternative Assessment

1. Answer is incorrect; find the LCM of 9 and 3; multiply $\frac{1}{3}$ by $\frac{3}{3}$; then add $-\frac{4}{9} + \frac{3}{9}$. The correct answer is $-\frac{1}{9}$ 2. Multiply each amount by $\frac{1}{2}$ or divide each amount by 2. 3. Sample answer: Lisa and George bought a pizza with 15 equal pieces. George ate $\frac{1}{3}$ of the pizza and together they ate $\frac{3}{5}$. How much did Lisa eat? Lisa ate $\frac{4}{15}$ of the pizza.
4.a. $4\frac{1}{6}$ b. 1.27 c. cm to m; It is easier to divide by 100 than 12.
5. $(ab)^5 = (ab)(ab)(ab)(ab)(ab)$
 $= a \cdot a \cdot a \cdot a \cdot a \cdot b \cdot b \cdot b \cdot b \cdot b = a^5b^5$

Cumulative Review

1. D 2. G 3. A 4. H 5. D 6. H 7. $1\frac{5}{24}$
8. $-\frac{5}{18}$ 9. $3\frac{17}{60}$ 10. 42 11. $2\frac{1}{4}$ 12. $\frac{11}{20}$ 13. $\frac{2}{15}$
14. $-6\frac{4}{5}$ 15. -100 16. $\frac{6}{7}$ 17. $36k^2$ 18. $\frac{x^4}{81}$
19. $\frac{8m^3}{n^6}$ 20. $\frac{2}{81}, \frac{2}{243}, \frac{2}{729}$; Sample answer: Start with 2 and multiply by $\frac{1}{3}$ repeatedly.