

Chapter 6 Support File Answers

Practice 6-1

- 26 mi/gal
- \$7.50/h
- 52 mi/h
- 13 throws/bull's eye
- $\frac{13}{15}$
- $\frac{17}{13}$
- $\frac{15}{13}$
- $\frac{1}{1}$
- $\frac{1}{2}$
- $\frac{3}{4}, \frac{3}{7}, \frac{4}{7}$
- $\frac{3}{2}, \frac{3}{5}, \frac{2}{5}$
- $\frac{2}{4}, \frac{2}{6}, \frac{4}{6}$
- $\frac{7}{12}$
- $\frac{1}{2}$
- $\frac{2}{9}$
- $\frac{4}{5}$
- $\frac{3}{5}$
- $\frac{13}{14}$
- $\frac{3}{7}$
- $\frac{5}{7}$
- $\frac{4}{3}$
- $\frac{1}{4}$

Practice 6-2

- $\frac{420}{36} = \frac{f}{30}$, $f = 350$ ft²
- $\frac{75}{6} = \frac{p}{4}$, $p = 50$ pts
- $\frac{6}{1.00} = \frac{15}{d}$, $d = \$2.50$
- proportion
- proportion
- proportion
- not a proportion
- not a proportion
- proportion
- $x = 25$
- $n = 17$
- $h = 28$
- $f = 110$
- $m = 75$
- $j = 102.9$
- $r = 11.5$
- $x = 19.9$
- \$3.08
- 75 min

Practice 6-3

- 32 mi
- 80 mi
- 56 mi
- 160 mi
- 128 mi
- 116 mi
- 5
- 42.5
- 36
- 21.3, 15.8
- 5.5 m
- $\frac{3}{4}$ in.
- $2\frac{3}{4}$ in.
- $8\frac{1}{2}$ in.

Practice 6-4

- $\frac{2}{11}$
- $\frac{1}{11}$
- $\frac{3}{11}$
- $\frac{10}{11}$
- 1 to 1
- 3 to 4
- 1 to 6
- 5 to 9
- 11 to 3
- 4 to 3
- $\frac{1}{24}$
- $\frac{1}{12}$
- $\frac{3}{8}$
- $\frac{5}{8}$
- $\frac{7}{8}$
- $\frac{3}{8}$
- 1 to 3
- 1 to 1
- 23 to 1
- 5 to 3
- 1 to 11
- 5 to 7

Practice 6-5

- 16%
- 72%
- 96%
- 77.5%
- 55.5%
- 40.3%
- 304%
- 500.9%
- 0.04%
- 307.7%
- 57.1%
- 57.6%
- 0.08
- 0.124
- 1.45
- 0.0007
- 0.075
- 0.1525
- $\frac{3}{5}$
- $\frac{1}{20}$
- $\frac{7}{20}$
- $\frac{8}{25}$
- $1\frac{2}{5}$
- $\frac{1}{125}$
- $>$
- $=$
- $>$
- 5%

Practice 6-6

- 56
- 88
- 35
- 200
- 800
- 30%
- 37.5%
- 90%
- 78%
- 20
- 111

- 165
- 117
- 28 games
- 87.5%
- 4,200 votes

Practice 6-7

- 68%
- 125%
- 75%
- 0.5%
- 27
- 169
- 58
- 36.2
- 8
- 14
- 57
- 70
- 7,000
- 1,300
- 80%
- 1,440 students

Practice 6-8

- 12.5%; decrease
- 25%; increase
- 13%; increase
- 18%; decrease
- 66.7%; increase
- 300%; increase
- 70%; decrease
- 21%; decrease
- 26.8%; increase
- 33.9%; decrease
- 20%; increase
- 50%; decrease
- 25%; decrease
- 900%; increase
- 100%; increase
- 400%; increase
- 33.3%; increase
- 25%; increase
- 69.6%; increase
- 52.6%; decrease
- 52.6% increase
- 70.5%; decrease
- 8.2%
- 14.6%
- 26%

Practice 6-9

- \$34.50
- \$30.13
- 104.40
- \$.98
- \$43.50
- \$540.00
- \$9.63
- \$37.50
- \$314.50
- \$271.98
- \$24.04
- \$886.80
- a. \$26.60 b. \$6.65 c. \$19.95 d. \$5.95 e. 42.5%

Practice 6-10

- \$10,625; \$9,031.25; \$7,676.56; \$6,525.08
- \$115, \$110, \$105, \$100, \$95; Marcus bought 3 videotapes and 3 CD's
- 6 fizzes
- 13 ways
- 226; 244; 264; 285
- 12 different sandwiches
- 1:00 P.M.

Reteaching 6-1

- \$6.50/h
- 62 mi/h
- \$1.095/gal
- 9.5 gal/min
- 13.5¢/oz
- 74 words/min
- \$.09/fl oz; \$.11/fl oz; 12 fl oz bottle
- 8.2 mi/gal; 9.5 mi/gal; returning from the museum

Reteaching 6-2

- $p = 14$
- $x = 8$
- $y = 39$
- $x = 5.25$
- $t = 72$
- $y = 46.67$
- $e = 24.5$
- $k = 15$
- $m = 22.5$
- $w = 38.4$

Chapter 6 Support File Answers (continued)

11. $z = 4$ 12. $a = 28$ 13. $r = 52$ 14. $t = 48$
15. $c = 6.3$ 16. $e = 18$ 17. Answers may vary.

Reteaching 6-3

- 1.a. $\frac{MN}{ST} = \frac{MP}{SW}, \frac{MN}{ST} = \frac{NP}{TW}$ b. $\frac{20}{15} = \frac{NP}{24}$;
 $SW = 27, NP = 32$ 2. $DK = 55, RV = 84$
3. $AN = 39, GS = 42$

Reteaching 6-4

1. $\frac{1}{4}$ 2. $\frac{1}{6}$ 3. $\frac{5}{6}$ 4. 1 5. $\frac{3}{4}$ 6. 0 7. $\frac{1}{20}$ 8. $\frac{1}{2}$
9. $\frac{1}{5}$ 10. 0 11. $\frac{11}{20}$ 12. $\frac{2}{5}$ 13. $\frac{1}{4}$ 14. 1
15. $\frac{1}{5}$ 16. $\frac{1}{2}$

Reteaching 6-5

1. 70% 2. 60% 3. 55% 4. 68% 5. 20%
6. 39% 7. 5% 8. 26% 9. 62.5%
10. 18.75% 11. $\frac{3}{20}$ 12. $\frac{1}{8}$ 13. $\frac{19}{25}$ 14. $\frac{7}{50}$
15. $\frac{3}{5}$ 16. $\frac{97}{100}$ 17. $\frac{1}{4}$ 18. $\frac{3}{10}$ 19. $\frac{41}{50}$ 20. $\frac{11}{16}$

Reteaching 6-6

1. 80% 2. 75% 3. 68% 4. 127.5%
5. 87.5% 6. 26.3% 7. 28.8 8. 57 9. 78
10. 26.4 11. 12.2 12. 14.5 13. 70
14. 300 15. 16 16. 30,666.7 17. 1,607.7
18. 64.7

Reteaching 6-7

1. 140% 2. 65% 3. 66.7% 4. 87.5%
5. 37.5% 6. 22.2% 7. 39 8. 0.1 9. 102
10. 117 11. 7 12. 47.3 13. 63.2 14. 70.8
15. 140 16. 175 17. 384 18. 325

Reteaching 6-8

1. 12.5% 2. 66.7% 3. 126.7% 4. 700%
5. 62.5% 6. 75% 7. 40% 8. 175% 9. 75%
10. 37.5% 11. 45% 12. 33.3% 13. 30.3%
14. 12% 15. 100% 16. 68%

Reteaching 6-9

1. \$25.50 2. \$81.60 3. \$203.50 4. \$143.55
5. \$452.25 6. \$14.25 7. \$115.60 8. \$594.30
9. \$17.99 10. \$1.68

Reteaching 6-10

1. \$90; \$1,890 2. \$1,890; \$94.50; \$1,984.50
3. \$1,984.50; \$99.23; \$2,083.73 4. \$2,083.73;
\$104.19; \$2,187.92 5. \$2,187.92; \$109.40;
\$2,297.32 6. \$2,297.32; \$114.87; \$2,412.19;
7. \$2,412.19; \$120.61; \$2,532.80 8. \$2,532.80;
\$126.64; \$2,659.44 9. \$2,659.44; \$132.97;
\$2,792.41 10. \$2,792.41; \$139.62; \$2,932.03,
\$2,932.03

Enrichment 6-1

1. 460 2. $\frac{3}{10}$ 3. $\frac{1}{20}$ 4. $\frac{2}{5}$ 5. $\frac{1}{4}$
6. 423,200 people 7. 3,385,600 people 8. 168
9. $\frac{1}{3}$ 10. $\frac{5}{12}$ 11. $\frac{1}{4}$ 12. 29 13. $\frac{29}{42}$

Enrichment 6-2

1. Sample answers: $\frac{4}{5} = \frac{8}{10}, \frac{4}{8} = \frac{5}{10}, T$ 2. $\frac{B}{D}$
3. true 4. $\frac{D}{C}$ 5. false 6. false 7. true
8. true 9. $\frac{C+D}{D}, \frac{C-D}{D}$ 10. Sample answers:
 $\frac{9}{-1} = \frac{18}{-2}, \frac{5}{-1} = \frac{15}{-3}, \frac{15}{-1} = \frac{30}{-2}$ 11. yes

Enrichment 6-3

1. Answers may vary. Check that measures are reasonable and scale lengths are proportional.
2. Answers may vary. 3. Check student's drawings.

Enrichment 6-4

1. $\frac{1}{8}$, 1 to 7 2. $\frac{1}{2}$, 1 to 1 3. $\frac{3}{4}$, 3 to 1 4. $\frac{3}{8}$, 3 to 5
5. $\frac{a}{a+b}$ 6. 1 to 7 7. 13 to 3 8. 3 to 5
9. 3 to 1 10. $\frac{1}{8}$ 11. $\frac{13}{16}$ 12. $\frac{3}{8}$ 13. $\frac{3}{4}$

Enrichment 6-5

1. 40% E 2. 35% A 3. 30% A 4. 8% A
5. 25% I 6. 20% G 7. $33\frac{1}{3}\%$ R 8. 80% C
9. 37.5% N 10. 2% D 11. 3% S 12. 200% W
13. 2.5% L
A SCALE DRAWING

Enrichment 6-6

1. 400 2. 60%, 35%, 7% 3. age 20–39
4. 120 males 5. 12.5% 6. 6,400 females
7. 30 respondents 8.a. 35% b. 14 respondents

Chapter 6 Support File Answers (continued)

Enrichment 6-7

1. $\frac{1}{10}, \frac{1}{8}, \frac{1}{5}, \frac{1}{4}, \frac{3}{10}, \frac{1}{3}, \frac{2}{5}, \frac{1}{2}, \frac{3}{7}, \frac{3}{10}, \frac{4}{5}, \frac{5}{6}, \frac{9}{10}$ 2. 10 3. 33
4. 30 5. 120 6. 20 7. 250 8. 63 9. 1,000
10. 44, 15, 22, 9 11. 60%

Enrichment 6-8

1. \$44.31 2. \$.35 3. \$1.01 4. 7.8% 5. 4.9%
6. 24.3%

Enrichment 6-9

1. Sample answer: No; a single markdown of 40% is better because it is taken off the total price.
2. Sample answer is given in question 1.
3. \$15.94 4. \$15 5. The single markdown is a better buy. By taking 15% off the already reduced price, you are taking 15% off a lesser amount.
6. $1 - (0.75 \times 0.85) = 0.3625$; It is equal to a single markdown of 36.25% 7. The final price at Shirt Shack is \$17.50. The final price at Terrific Tops is \$17.85. Shirt Shack has the better buy.

Enrichment 6-10

1. \$1,080 2. \$9,480 3. \$86.84, \$11,365.27; \$11,365.27, \$85.24, \$11,150.51; \$11,150.51, \$83.63, \$10,934.14; \$10,934.14, \$82.01, \$10,716.15; \$10,716.15, \$80.37, \$10,496.52; \$10,496.52, \$78.72, \$10,275.24; \$10,275.24, \$77.06, \$10,052.30; \$10,052.30, \$75.39, \$9,827.69; \$9,827.69, \$73.71, \$9,601.40; \$9,601.40, \$72.01, \$9,373.41 4. \$106.59

Checkpoint 1

1. 14 mi/h 2. \$1.19/gal 3. 32 ft/s 4. 17.5
5. 6 days 6. D

Checkpoint 2

1. < 2. > 3. = 4. $0.26 \cdot 140 = n$, 36.4
5. $700x = 14, 2\%$ 6. $0.85k = 68, 80$ 7. \$42

Chapter 6 Assessment Form A

1. A 2. G 3. D 4. H 5. A 6. G 7. B
8. H 9. B 10. J 11. C 12. F 13. D
14. $\frac{120}{3} = \frac{x}{5}$, $x = 200$ words 15. $\neq$ 16. $\frac{3}{4}$ in.
17. 6 ft 18. \$141.75 19. 5 ways 20. Sample answer: A proportion is true if the cross products are equal. Thus, $\frac{a}{b} = \frac{c}{d}$ is true if $ad = bc$.

Chapter 6 Assessment Form B

1. A 2. J 3. B 4. J 5. C 6. G 7. A
8. J 9. C 10. G 11. A 12. H 13. D
14. $\frac{8.5}{11} = \frac{n}{8.25}$, $n = 6.375$ in. 15. = 16. $3\frac{1}{3}$ in.
17. 6 ft 18. \$24.50 19. 7 pizzas 20. Sample answer: Find the cross products and then solve the resulting equation for the missing value.

Chapter 6 Alternative Assessment

1. $\frac{14}{2}, \frac{21}{3}, \frac{28}{4}, \frac{35}{5}, \frac{42}{6}, \frac{49}{7}$ 2. $\frac{7}{1}$ 3. Sample answer: Use a proportion $\frac{1}{15} = \frac{x}{100}$. 4. Sample answer: What is 18% of 30? $x = 0.18(30)$; $x = 5.4$; 5.4 is 18% of 30 5. Subtract to find the amount of decrease. Write a ratio comparing the amount of decrease to the original amount. Write the ratio as a percent. 6. Sample answer: $x > 50$ because 16 is more than half of 30. 7. $P(I) = \frac{1}{11}$,
 $P(M) = \frac{2}{11}$, $P(\text{vowel}) = \frac{4}{11}$

Cumulative Review

1. B 2. H 3. D 4. J 5. A 6. F 7. D
8. F 9. C 10. H 11. B 12. $\frac{x}{120} = \frac{114}{144}$,
 $x = 95$ 13. \$20.99 14. 3.9% 15. 56%
16. 24.2% 17. $\frac{2}{9}$ 18. $\frac{2}{3}$ 19. 36 mi 20. 86 mi
21. 15 22. 23.3 23. $\frac{3}{7}$ 24. $\frac{8}{15}$ 25. Sample answer: Multiply the percent of markup in decimal form by the cost. Add the result to the cost.