Answers *continued*

7. a. $\frac{3}{2}$ **b.** 1 **c.** $\overline{DG} \cong \overline{EF}$ because opposite sides of rectangle are congruent. $m\angle DGF = m\angle EFG = 90°$ by def. of a rectangle. $m\angle EFC + m\angle EFG = 180°$ and $m\angle DGA + m\angle DGF = 180°$ because linear angles are supplementary. $m\angle DGA + 90° = 180°$ and $m\angle EFC + 90° = 180°$ by Substitution Prop. of Equality. $m\angle DGA = m\angle EFC = 90°$ by Subtraction Prop. of Equality. $m\angle A = m\angle B = m\angle C = 60°$ because regular triangles have 3 congruent angles. $\triangle ADG \cong \triangle CEF$ by AAS.

Section 6.7

1. D **2.** B **3.** A **4.** C **5.** E **6.** D **7.** A

8. a. 20 ft^2 **b.** 92 in.^{2} **c.** 11.25 ft^2

Cumulative Review

Chapters 1–6

1. B **2.** C **3.** C **4.** D **5.** A **6.** B

7. A **8.** C **9. a.** If you stay up late, then you are tired. **b.** If you are tired, then you are cranky. **c.** $\sim q \rightarrow \sim p$; if you are not tired, then you did not stay up late. **d.** If you stay up late, then you are cranky. **10.** C **11.** E **12.** D **13.** B **14.** C **15.** A **16.** B **17.** D **18.** C **19.** A **20.** D **21.** B **22.** B **23.** E **24.** D **25.** E **26.** C **27.** C **28.** D **29.** A **30.** D **31.** B **32.** B **33.** B

Chapter 7

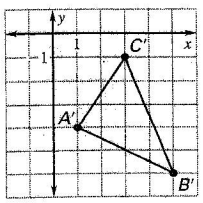
Section 7.1

1. D **2.** C **3.** B **4.** D **5.** B **6.** A

Section 7.2

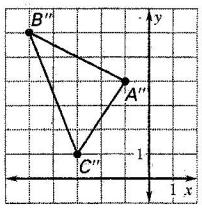
1. D **2.** B **3.** E **4.** C **5.** B **6.** E **7.** A

8. a. $A'(1, -4)$, $B'(5, -6)$, $C'(3, -1)$

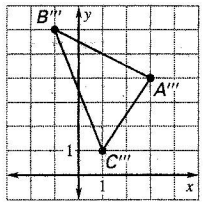


b. $\overline{A'B'}$

c. $A''(-1, 4)$, $B''(-5, 6)$, $C''(-3, 1)$



d. $A'''(3, 4)$, $B'''(-1, 6)$, $C'''(1, 1)$



e. (1, 0)

Section 7.3

1. B **2.** C **3.** D **4.** E **5.** C **6.** A **7.** A

Section 7.4

1. C **2.** D **3.** B **4.** E **5.** D **6.** B

Section 7.5

1. C **2.** A **3.** A **4.** B **5.** D

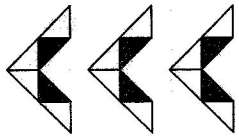
Section 7.6

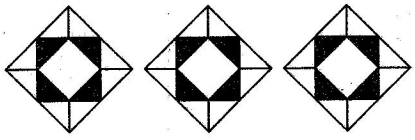
1. C **2.** B **3.** E **4.** E **5.** B **6.** A

7. *Sample answers:*

a. 

b. 

c. 

d. 

Chapter 8

Section 8.1

1. B **2.** C **3.** B **4.** D **5.** E **6.** E **7.** B **8.** C **9.** A

Section 8.2

1. D **2.** C **3.** C **4.** D **5.** E **6.** D **7.** C **8.** A **9.** B **10.** C

Section 8.3

1. C **2.** B **3.** D **4.** E **5.** D **6.** A **7.** C **8.** C

Answers *continued*

Section 8.4

1. C **2.** B **3.** D **4.** A **5.** E **6. a.** 6.4 **b.** 3.75 **c.** $\frac{5}{13}$ **d.** 20.3 **e.** *Sample answer:* Use parallel lines to show that two pairs of corresponding angles are congruent. Then by the AA Similarity Postulate, the two triangles are similar.

Section 8.5

1. A **2.** C **3.** D **4.** E **5.** B **6.** C

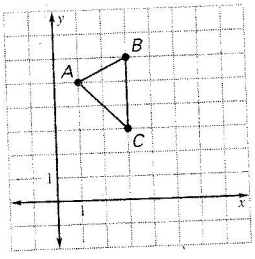
Section 8.6

1. D **2.** E **3.** B **4.** A **5.** C **6.** B **7.** A **8.** A

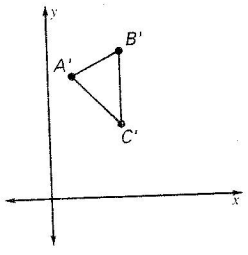
Section 8.7

1. A **2.** E **3.** C **4.** B **5.** D

6. a.

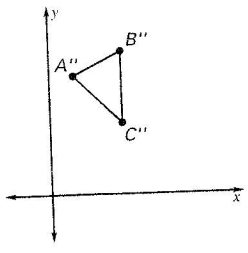


b.



$A'(2, 10)$, $B'(6, 12)$, $C'(6, 6)$ **c.** 6

d.



$A''\left(\frac{1}{2}, \frac{5}{2}\right)$, $B''\left(\frac{3}{2}, 3\right)$, $C''\left(\frac{3}{2}, \frac{3}{2}\right)$

e. $\sqrt{2}$ **f.** 4

Chapter 9

Section 9.1

1. C **2.** D **3.** E **4.** A **5.** B **6.** C **7.** C **8. a.** 9.8 ft **b.** 17.8 ft **c.** 12.3 ft **d.** $\triangle HTG \sim \triangle AHG \sim \triangle ATH$

Section 9.2

1. D **2.** D **3.** B **4.** C **5.** D **6.** D **7.** A **8.** A

Section 9.3

1. C **2.** E **3.** B **4.** A **5.** C **6.** A **7.** D **8.** A **9.** B

Section 9.4

1. D **2.** C **3.** A **4.** E **5.** C **6.** C **7.** B **8.** A **9. a.** $5\sqrt{2}$ units **b.** $\frac{5\sqrt{2}}{2}$ units **c.** $\frac{5}{2}$ units **d.** 5 units **e.** $\frac{5\sqrt{3}}{2}$ units **f.** 32.2 square units

Section 9.5

1. A **2.** C **3.** B **4.** E **5.** D **6.** B **7.** C **8.** B **9.** B

Section 9.6

1. D **2.** C **3.** C **4.** B **5.** E **6.** A **7.** B **8.** A **9.** B

Section 9.7

1. D **2.** A **3.** C **4.** E **5.** B **6.** A **7.** B **8.** E **9. a.** about 680 mi/h; 48.6° NE from horizontal **b.** about 361 mi/h; 33.8° NW from horizontal **c.** 735 mi/h; 43.9° NE from horizontal **d.** 297 mi/h; 42.2° NW from horizontal

Chapter 10

Section 10.1

1. B **2.** D **3.** B **4.** E **5.** D **6.** A **7.** E **8. a.** (2, 3), 3 **b.** (5, 0), 3 **c.** (2, 0), (5, 3) **d.** external

Answers *continued*

Section 10.2

1. C **2.** B **3.** D **4.** D **5.** B **6.** C **7.** E
8. C **9.** A **10.** C

Section 10.3

1. D **2.** B **3.** C **4.** A **5.** C **6.** D **7.** B
8. E **9.** C **10.** B

Section 10.4

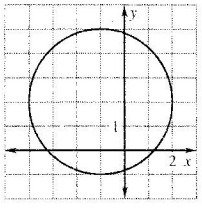
1. B **2.** C **3.** E **4.** A **5.** D **6.** C **7.** B
8. D **9.** A **10.** B

Section 10.5

1. A **2.** B **3.** E **4.** D **5.** D **6.** A **7.** C
8. B **9.** A

Section 10.6

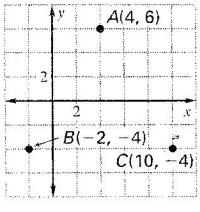
1. E **2.** C **3.** D **4.** C **5.** D **6.** B **7.** A
8. D
9. a. -1 **b.** $(x + 1)^2 + (y - 2)^2 = 9$
c.



d. *Sample answers:* $(-1, 5)$; $(0, 0)$; $(5, 0)$

Section 10.7

1. B **2.** E **3.** C **4.** E **5.** A **6.** E **7.** D
8. a.



b. A: $(x - 4)^2 + (y - 6)^2 = 100$
B: $(x + 2)^2 + (y + 4)^2 = 36$
C: $(x - 10)^2 + (y + 4)^2 = 36$
c. $(4, -4)$

Chapter 11

Section 11.1

1. B **2.** A **3.** C **4.** D **5.** D **6.** C **7.** B
8. E **9.** B **10.** B

Section 11.2

1. E **2.** B **3.** B **4.** A **5.** C **6.** C **7.** B
8. B

Section 11.3

1. B **2.** D **3.** C **4.** B **5.** D **6.** A **7.** E
8. a. 1200 ft^2 **b.** 1500 ft^2 **c.** 4:5 **d.** 240 ft
e. \$1440

Section 11.4

1. B **2.** A **3.** D **4.** C **5.** A **6.** E **7.** D
8. D **9.** A

Section 11.5

1. E **2.** D **3.** B **4.** B **5.** E **6.** C **7.** D
8. B **9.** B

Section 11.6

1. D **2.** D **3.** A **4.** B **5.** E **6.** C **7.** A

Chapter 12

Section 12.1

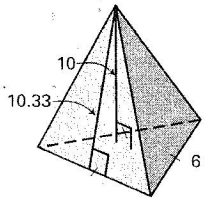
1. E **2.** C **3.** C **4.** B **5.** B **6.** C **7.** E
8. A

Section 12.2

1. D **2.** B **3.** B **4.** A **5.** C **6.** D **7.** E
8. A **9.** A

Section 12.3

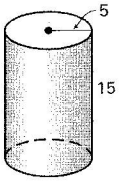
1. C **2.** B **3.** E **4.** D **5.** A **6.** E **7.** E
8. a.

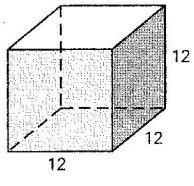


b. 92.97 in.^{2}
c. 108.57 in.^{2}
d. 1:4

Section 12.4

1. C **2.** B **3.** D **4.** A **5.** B **6.** E **7.** B
8. E
9. a.





Answers *continued*

b. 1178.1 in.^{3} **c.** 1728.0 in.^{3}

d. about 5.1 gallons

Section 12.5

1. C **2.** D **3.** A **4.** B **5.** A **6.** A

Section 12.6

1. D **2.** B **3.** D **4.** B **5.** A **6.** C **7.** B

8. A

Section 12.7

1. D **2.** A **3.** C **4.** B **5.** C **6.** A

7. a. 3:4 **b.** 20 in. **c.** 871.1 in.^{3}

d. 101.8 in.^{2}

Cumulative Review

Chapters 1–12

1. E **2.** D **3.** E **4.** B **5.** C **6.** A **7.** E

8. D **9.** A **10.** C **11.** B **12.** D **13.** B

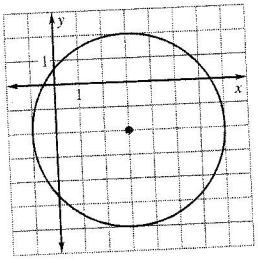
14. B **15.** E **16.** A **17.** C **18.** D **19.** D

20. D **21.** E **22.** A **23.** B **24.** B

25. D **26.** B **27.** A

28. a. 3 **b.** $(x - 3)^2 + (y + 2)^2 = 16$

c.



29. C **30.** E **31.** B **32.** E **33.** C **34.** C

35. D **36.** B **37.** B **38.** A **39.** A