

## Answers for Chapter 10, pp. 734-735 Extra Practice

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1. 15 ft;  $10.825 \text{ ft}^2$
2. 16 m;  $12 \text{ m}^2$
3. 50 ft;  $143 \text{ ft}^2$
4. 47 m;  $102 \text{ m}^2$
5. 60 yd;  $120 \text{ yd}^2$
6. perimeter not possible as slanted sides could be any length;  
 $270 \text{ in.}^2$
7.  $72 \text{ cm}^2$
8.  $15 \text{ in.}^2$
9.  $\frac{25}{4} \sqrt{3} \text{ mm}^2$
10.  $32\sqrt{3} \text{ ft}^2$
11.  $3500 \text{ ft}^2$
12.  $2.625 \text{ in.}^2$
13.  $\frac{73\sqrt{3}}{128} \text{ in.}^2$
14.  $210 \text{ ft}^2$
15. 5:8; 25:64
16. 3:4; 9:16
17. 5:16; 25:256
18.  $560 \text{ in.}^2$
19. 48.4 cm
20.  $30.1 \text{ ft}^2$
21.  $78.0 \text{ in.}^2$
22.  $43.2 \text{ cm}^2$
23.  $20 \text{ m}^2$
24.  $31.2 \text{ ft}^2$
25.  $70.7 \text{ ft}^2$
26. a.  $6\pi \text{ cm}$
27. a.  $20\pi \text{ ft}$
- b.  $2\pi \text{ cm}$
- b.  $\frac{5}{3}\pi \text{ ft}$
28. a.  $18\pi \text{ cm}$
29. a.  $10\pi \text{ in.}$
- b.  $\frac{9}{2}\pi \text{ cm}$
- b.  $\frac{25}{4}\pi \text{ in.}$
30. 482
31.  $\frac{49}{3}\pi \text{ ft}^2$
32.  $(12\pi - 9\sqrt{3}) \text{ in.}^2$
33.  $\frac{81}{8}\pi \text{ cm}^2$
34.  $(4\pi - 8) \text{ m}^2$
35.  $26 \text{ in.}^2$

## Answers for Chapter 10, pp. 734-735 Extra Practice (cont.)

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36.  $\frac{1}{4}$

37.  $\frac{1}{3}$

38.  $1 - \frac{\pi}{4}$

39.  $\frac{7}{24}$

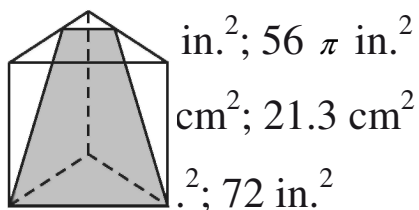
40.  $\frac{11}{36}$

41.  $1 - \frac{25}{81\pi}$

## Answers for Chapter 11, pp. 736-737 Extra Practice

1. equilateral  $\triangle$ ;  $7 + 10 = 15 + 2$
2. rectangle;  $7 + 10 = 15 + 2$
3. equilateral  $\triangle$ ;  $7 + 7 = 12 + 2$
4. regular hexagon;  $7 + 10 = 15 + 2$
- 5.

6.  $84 \text{ ft}^2$ ;  $108 \text{ ft}^2$



14.  $55.0 \text{ ft}^2$ ;  $83.2 \text{ ft}^2$

16.  $16 \text{ mm}^3$

18.  $15\pi \text{ m}^3$

20.  $540 \text{ cm}^3$

22.  $347.6 \text{ m}^3$

24.  $5670 \text{ ft}$

26.  $5.7 \text{ in.}^3$

27.  $\frac{500\pi}{3} \text{ cm}^3, 524 \text{ cm}^3$ ;  $100\pi \text{ cm}^2, 314 \text{ cm}^2$

28.  $36\pi \text{ ft}^3, 113 \text{ ft}^3$ ;  $36\pi \text{ ft}^2, 113 \text{ ft}^2$

29.  $\frac{256\pi}{3} \text{ in.}^3, 268 \text{ in.}^3$ ;  $64\pi \text{ in.}^2, 201 \text{ in.}^2$

30.  $\frac{4\pi}{3} \text{ ft}^3, 4 \text{ ft}^3$ ;  $4\pi \text{ ft}^2, 13 \text{ ft}^2$

7.  $28\pi \text{ cm}^2$ ;  $36\pi \text{ cm}^2$

9.  $108\sqrt{3} \text{ in.}^2$ ;  $144\sqrt{3} \text{ in.}^2$

11.  $339.3 \text{ cm}^2$ ;  $439.8 \text{ cm}^2$

13.  $37.5 \text{ cm}^2$ ;  $47.9 \text{ cm}^2$

15.  $51.7 \text{ cm}^2$ ;  $71.0 \text{ cm}^2$

17.  $175 \text{ mm}^3$

19.  $45\pi \text{ in.}^3$

21.  $400 \text{ in.}^3$

23.  $49.3 \text{ in.}^3$

25.  $486.0 \text{ cm}^3$

## Answers for Chapter 11, pp. 736-737 Extra Practice (cont.)

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31.  $\frac{\pi}{6} \text{ in.}^3$ ,  $1 \text{ in.}^3$ ;  $\pi \text{ in.}^2$ ,  $3 \text{ in.}^2$

32.  $\frac{243\pi}{2} \text{ m}^3$ ,  $382 \text{ m}^3$ ;  $81 \pi \text{ m}^2$ ,  $254 \text{ m}^2$

33.  $\frac{256\pi}{3} \text{ m}^3$

34.  $\frac{32\pi}{3} \text{ in.}^3$

35.  $\frac{343\pi}{6} \text{ ft}^3$

36.  $9.62 \text{ ft}^2$ ;  $2.81 \text{ ft}^3$

37. 4:9; 8:27

38. 5:8; 125:512

39. 3:4; 9:16

40. S.A. is multiplied by  $\frac{25}{16}$ . Volume is multiplied by  $\frac{125}{64}$ .

41.  $\left(\frac{V_1}{V_2}\right)^2 = \left(\frac{A_1}{A_2}\right)^3$

## Answers for Chapter 12, pp. 738-739 Extra Practice

1. 65

2. 10

3. 6

4.  $2\sqrt{3}$

5. Tangents to a  $\odot$  from a point outside the  $\odot$  are E, so  $AS = AP$ ,  $BP = BQ$ ,  $CQ = CR$ , and  $DR = DS$ . By the Segment Add. Post. and various Props. or =,

$$AB + DC =$$

$$AP + BP + DR + CR =$$

$$AS + BQ + DS + CQ =$$

$$BQ + CQ + AS + DS =$$

$$BC + AD$$

6. 14.8

7. 5.2

8. 5.3

9. 20

10.  $a = 154$ ;  $b = 76$

11.  $a = 38$ ;  $b = 52$ ;  $c = 104$ ;  $d = 90$

12.  $a = 105$ ;  $b = 100$

13.  $a = 55$ ;  $b = 72$ ;  $c = 178$ ;  $d = 89$

14. Yes. Each side of the polygon is a chord of the circle, and the  $\infty$  bis. of any chord contains the center of the circle.

15. 1.82 units

16.  $\angle A \cong \angle D$  since they both intercept  $BC$ .  $\angle APB \cong \angle DPC$  since they are vertical.  $\triangle APB \sim \triangle DPC$  by AA $\sim$ .

17.  $x = 193$ ;  $y = 60.5$

18.  $x = 5.6$

19.  $x \approx 10.4$

20.  $x = 70$

21.  $x = 112.5$ ;  $y = 67.5$

22.  $x = 11.5$

23.  $x = 42.5$

24.  $x \approx 5.6$ ;  $y \approx 11.9$

Answers for Chapter 12, pp. 738-739 Extra Practice (cont.)

25. 90; 150

26. 18 ft

27.  $x^2 + y^2 = 16$

28.  $x^2 + (y - 5)^2 = 9$

29.  $(x - 9)^2 + (y + 3)^2 = 49$

30.  $(x + 4)^2 + y^2 = 37$

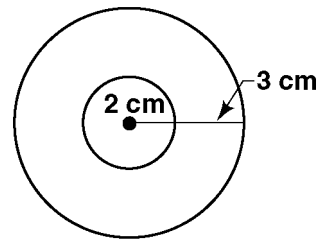
31.  $(x + 6)^2 + (y + 2)^2 = 13$

32.  $(x + 1)^2 + (y + 3)^2 = 9$

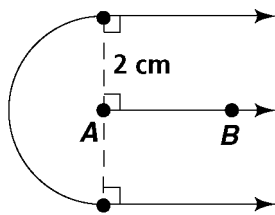
33. a.  $(x - 113)^2 + (y - 215)^2 = 85^2$

b.  $(x - 113)^2 + (y - 215)^2 = 170^2$

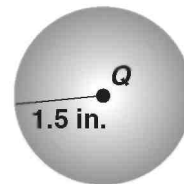
34. a circle of radius 5 cm, concentric with the orig. circle



35. two rays  $\parallel$  to and 2 cm from  $\overrightarrow{AB}$ , and the semicircle of radius 2 with center  $A$ , opp. pt.  $B$



36. a sphere of radius 1.5 in., and center  $Q$



37.

