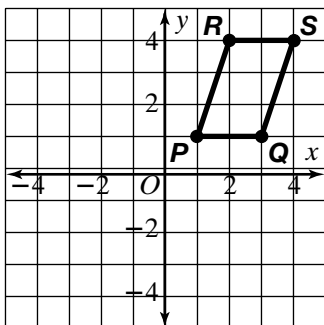


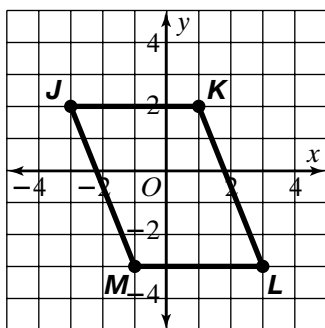
Chapter 10 Support File Answers

Practice 10-1

1. 504 ft^2 2. 117 m^2 3. $25,000 \text{ cm}^2$
4. $3,350 \text{ ft}^2$ 5. $1,275 \text{ m}^2$
6. 6 units^2



7. 20 units^2



8. 324 in.^2

Practice 10-2

1. 522 cm^2 2. 975 in.^2 3. 77 m^2 4. 52.5 in.^2
5. 255 cm^2 6. 12.25 ft^2 7. 504 m^2 8. 54 ft^2
9. 231 in.^2 10. 108 in.^2 11. 459 cm^2 12. 165 ft^2
13. 300 ft^2 14. 144 m^2 15. 12 cm

Practice 10-3

1. $49\pi \text{ m}^2, 153.9 \text{ m}^2$ 2. $81\pi \text{ cm}^2, 254.3 \text{ cm}^2$
3. $441\pi \text{ m}^2, 1,384.7 \text{ m}^2$ 4. $1,225\pi \text{ km}^2, 3,846.5 \text{ km}^2$
5. $121\pi \text{ cm}^2, 379.9 \text{ cm}^2$
6. $625\pi \text{ ft}^2, 1,962.5 \text{ ft}^2$ 7. $12.25\pi \text{ mi}^2, 38.5 \text{ mi}^2$
8. $6.25\pi \text{ in.}^2, 19.6 \text{ in.}^2$ 9. $24.01\pi \text{ mm}^2, 75.4 \text{ mm}^2$
10. 121.1 m^2 11. 22.0 in.^2
12. 21.5 ft^2 13. 99.9 cm^2 14. 78.5 m^2

Practice 10-4

1. square prism 2. hexagonal pyramid
3. pentagonal prism 4. The bases are rectangles. rectangular prism
5. The base is a pentagon. pentagonal pyramid
6. The base is a circle. cone
7. The bases are hexagons. hexagonal prism
8. The bases are triangles. triangular prism

9. The base is a rectangle. rectangular pyramid

Practice 10-5

1. 500 in.^2 2. $9,470.2 \text{ cm}^2$ 3. 480 mm^2
4. $3,330 \text{ ft}^2$ 5. 356 m^2 6. $1,092 \text{ in.}^2$ 7.a. \$38
- b. \$1,260 c. \$1,890 d. \$3,188

Practice 10-6

1. 283 cm^2 2. 39 in.^2 3. $1,280 \text{ m}^2$ 4. $1,017 \text{ ft}^2$
5. 204 in.^2 6. $1,520 \text{ cm}^2$ 7. 141 cm^2
8. 553 ft^2 9. $2,520 \text{ m}^2$ 10. $11,540 \text{ cm}^2$
- 11.a. pyramid b. 34.4 in.^2

Practice 10-7

1. 628 m^3 2. $1,408 \text{ cm}^3$ 3. $147,706 \text{ in.}^3$
4. 726 in.^3 5. 480 ft^3 6. $25,434 \text{ cm}^3$
7. 336 in.^3 8. $11,078 \text{ in.}^3$ 9. 879 cm^3
10. 74 ft^3 11. $2,197 \text{ m}^3$ 12. 177 ft^3
13. $8,139 \text{ m}^3$ 14. 192 ft^3

Practice 10-8

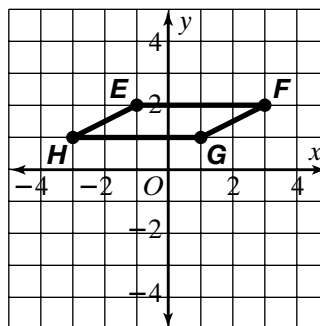
- 1.a. Answers may vary. b. A single loop results.
- 2.a. Answers may vary. b. parallelograms
- 3.a. Answers may vary. b. Lincoln is upright.
4. 224 cm^2

Practice 10-9

1. $3,052 \text{ ft}^3$ 2. $1,728 \text{ in.}^3$ 3. $1,272 \text{ in.}^3$
4. 33 m^3 5. 33 mm^3 6. $5,572 \text{ cm}^3$ 7. 324 in.^3
8. $1,005 \text{ cm}^3$ 9. 904 in.^3 10.a. $7,234.56 \text{ in.}^3, 4,186.67 \text{ in.}^3, 2,143.57 \text{ in.}^3, 13,564.8 \text{ in.}^3$
- b. $6,048 \text{ in.}^2$ c. about $2\frac{1}{4} \text{ in.}$

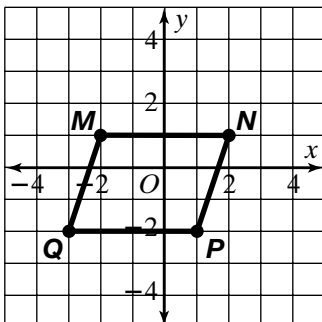
Reteaching 10-1

1. 4 units^2

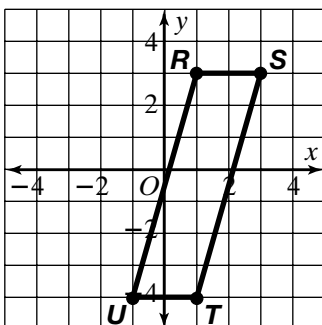


Chapter 10 Support File Answers (continued)

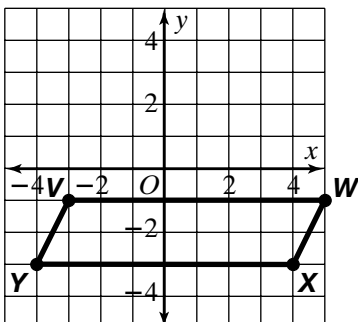
2. 12 units²



3. 14 units²



4. 16 units²



Reteaching 10-2

1. 60 m² 2. 72 in.² 3. 67.5 ft² 4. 258 cm²
 5. 27.5 ft² 6. 3,792 mm² 7. 11.25 in.²
 8. 2,200 m² 9. 95.4 km²

Reteaching 10-3

1. 9π m², 28.3 m² 2. $4,900\pi$ m², 15,386 m²
 3. 20.25π ft², 63.6 ft² 4. 225π cm², 706.5 cm²
 5. 64π in.², 201.0 in.² 6. 12.25π m², 38.5 m²
 7. 11.56π ft², 36.3 ft² 8. 210.25π cm², 660.2 cm²
 9. $20,164\pi$ mi², 63,315.0 mi²

Reteaching 10-4

1. octagon, triangles; octagonal pyramid
 2. octagons, rectangles; octagonal prism
 3. hexagons, rectangles; hexagonal prism
 4. triangles; triangular pyramid

Reteaching 10-5

1. 192 in.² 2. 290 ft² 3. 750 cm²

Reteaching 10-6

1. 484 ft² 2. 95 m² 3. 144 cm² 4. 754 in.²
 5. 297 cm² 6. 1,394 m²

Reteaching 10-7

1. 67,924 cm³ 2. 1,963 in.³ 3. 300 ft³
 4. 432 mm³ 5. 29,438 ft³ 6. 1,350 cm³

Reteaching 10-8

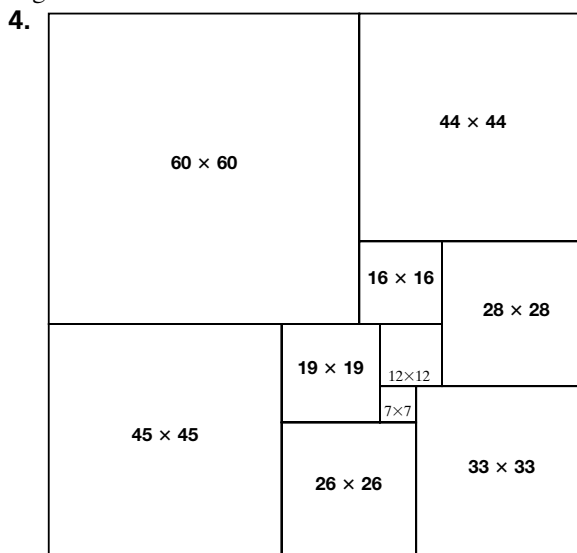
1. 13 cm, 10 cm, 1 cm, 130 cm³ 2. 11 cm, 8 cm, 2 cm, 176 cm³ 3. 9 cm, 6 cm, 3 cm, 162 cm³
 4. 7 cm, 4 cm, 4 cm, 112 cm³ 5. 5 cm, 2 cm, 5 cm, 50 cm³ 6. 2 cm by 8 cm by 11 cm

Reteaching 10-9

1. 75.36 m³ 2. 192 yd³ 3. 14,130 mm³
 4. 217 ft³ 5. 1.77 in.³ 6. 10,836 cm³
 7. 28,716.35 cm³ 8. 23,349.04 in.³ 9. 605 m³

Enrichment 10-1

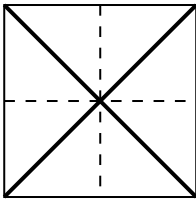
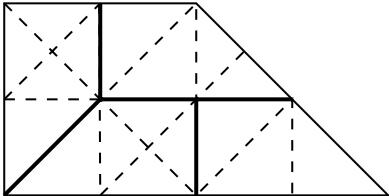
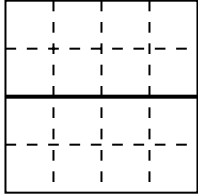
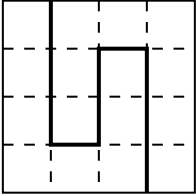
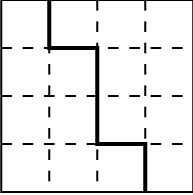
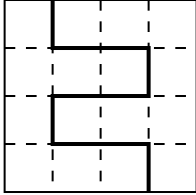
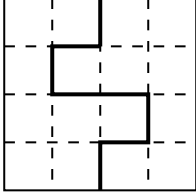
1. 13 2. 21 3. Add the area of the squares together.



104 units $\times$ 105 units; 10,920 units²

Chapter 10 Support File Answers (continued)

Enrichment 10-2

1. 
2. 
- 3.a.  b. 
- c.  d. 
- e. 

Enrichment 10-3

1. 12.56, 12.56, 25.12, 50.24, 2, 2, 4 2. 18.84, 28.26, 37.68, 113.04, 2, 2, 4 3. 25.12, 50.24, 50.24, 200.96, 2, 2, 4 4. 12.56, 12.56, 37.68, 113.04, 3, 3, 9
5. 18.84, 28.26, 56.52, 254.34, 3, 3, 9 6. 25.12, 50.24, 75.36, 452.16, 3, 3, 9 7. 12.56, 12.56, 62.8, 314, 5, 5, 25 8. 18.84, 28.26, 94.2, 706.5, 5, 5, 25
9. 25.12; 50.24; 125.6; 1,256; 5; 5; 25 10. The ratios will be the same. 11. The ratio of the areas of two circles equals the square of the ratio of their radii. 12.a. 12:1 b. 144:1 13. 7

Enrichment 10-4

1. 5, 5, 8, 2 2. 6, 8, 12, 2 3. 7, 10, 15, 2 4. 4, 4, 6, 2 5. 9, 9, 16, 2 6. In each case, $F + V - E = 2$. 7. 8 8. 24

Enrichment 10-5

- 1.a. 48 ft² b. \$2.50 2.a. 40 ft² b. \$2.08
- 3.a. 34 ft², \$1.77 b. 28 ft², \$1.46 c. 24 ft², \$1.25
- d. \$.52 4.a. 90 ft², \$4.23 b. 72 ft², \$3.38
- c. 54 ft², \$2.54 5. \$5.28 (one 4 × 4 × 4 package)

Enrichment 10-6

- A. 216 O. 184 E. 217 R. 108 R. 80π
T. 42π C. 64π M. 50π
MERCATOR

Enrichment 10-7

1. Subtract the volume of the hollow cylinder from the volume of the entire cylinder.
2. 301.88 in.³ 3. 103.5h in.³ 4. 12,420h in.³
5. 12,420h = 301.88 6. 0.024 in.

Enrichment 10-8

1. 4, 4, 6, 2 2. 8, 6, 12, 2 3. 12, 15, 25, 2 4. yes

Enrichment 10-9

1. 8.7 g/cm³ 2. 19.3 g/cm³ 3. 7.9 g/cm³
4. 189 g 5. 11,623.9 g 6. 1,504.8 g
7. magnesium 8. osmium 9. gold

Checkpoint 1

1. 38 ft² 2. 18 m² 3. 304 cm² 4. 72.25π in.², 227 in.² 5. 384 + 32π mm², 484 mm²

Checkpoint 2

1. cylinder 2. 4,396 ft² 3. 22,155.8 ft³
4. square pyramid 5. 5,805 m²

Chapter 10 Test Form A

1. C 2. J 3. C 4. F 5. B 6. 1,080 ft²
7. 56 m² 8. triangular prism 9. square prism

Chapter 10 Support File Answers (continued)

10. Sample answer is shown.

11. $14,952 \text{ mm}^2$

12. $119,952 \text{ mm}^3$

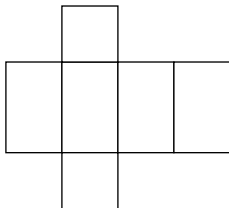
13. 144 ft^2 14. 96 ft^3

15. 62.8 cm^2

16. 37.7 cm^3

17. $3,629.8 \text{ in.}^2$

18. $20,569.1 \text{ in.}^3$ 19. $1,904 \text{ in.}^3$ 20. Sample answer: The pyramid has a square base that is 3 cm on a side and a height of 10 cm.



Chapter 10 Cumulative Review

1. B 2. G 3. C 4. F 5. D 6. F 7. C

8. H 9. A 10. J 11. D 12. 91 in.^2

13. 706.5 ft^2 14. 66.5 cm^2 15. 345.4 cm^2

16. 471 cm^3 17. 504 m^2 18. 672 m^3

19. $4,534.2 \text{ in.}^2$ 20. $28,716.3 \text{ in.}^3$ 21. Since the prism and pyramid have congruent bases and the same heights, the volume of the pyramid is $\frac{1}{3}$ the volume of the prism.

Chapter 10 Test Form B

1. B 2. H 3. D 4. F 5. A 6. 132 m^2

7. 388 ft^2 8. triangular prism 9. rectangular prism

10. Sample answer is shown.

11. $7,750 \text{ mm}^2$

12. $43,750 \text{ mm}^3$

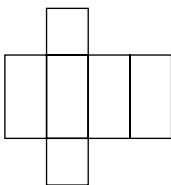
13. 106 cm^2 14. 60 cm^3

15. $1,865.2 \text{ m}^2$

16. $6,104.2 \text{ m}^3$

17. $4,534.2 \text{ in.}^2$ 18. $28,716.3 \text{ in.}^3$ 19. $1,440 \text{ in.}^3$

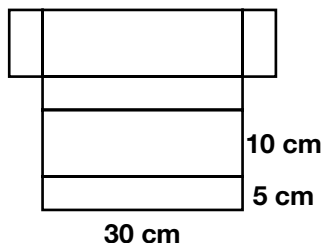
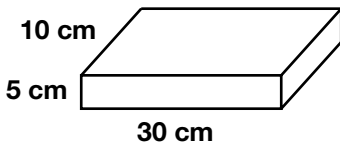
20. Sample answer: The pyramid has a square base that is 3 cm on a side and a height of 8 cm.



Chapter 10 Alternative Assessment

1. Find the areas of the rectangle and the circle. Subtract the area of the circle from the area of the rectangle. $A = 79.74 \text{ in.}^2$ 2. Lateral area is the sum of the areas of the faces on the sides. Surface area is the sum of the areas of the bases and the lateral faces. 3. The areas are the same. Sample example: $b = 10$, height of rectangle = 8, height of triangle = 16

4. 10 cm 5 cm 30 cm S.A. = $1,000 \text{ cm}^2$



5. Surface area is labeled in square units; volume is labeled in cubic units.