LESSON 10.1

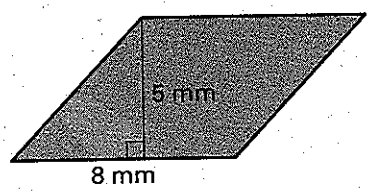
Name _____ Date _____

Practice

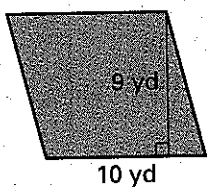
For use with pages 475–479

Find the area of the parallelogram.

1.



2.



Find the area of the parallelogram described.

3. base = 5 in., height = 7 in.

4. base = 8 mm, height = 12 mm

5. base = 11 yd, height = 4 yd

6. base = 15 ft, height = 10 ft

7. The height of a parallelogram is 12 inches and the base is 5 inches. What is the area of the parallelogram?

8. The area of a parallelogram is 120 square meters and the height is 6 meters. What is the base?

9. The area of a parallelogram is 72 square centimeters and the base is 9 centimeters. What is the height of the parallelogram?

10. Draw two different parallelograms that each have an area of 4 square inches.

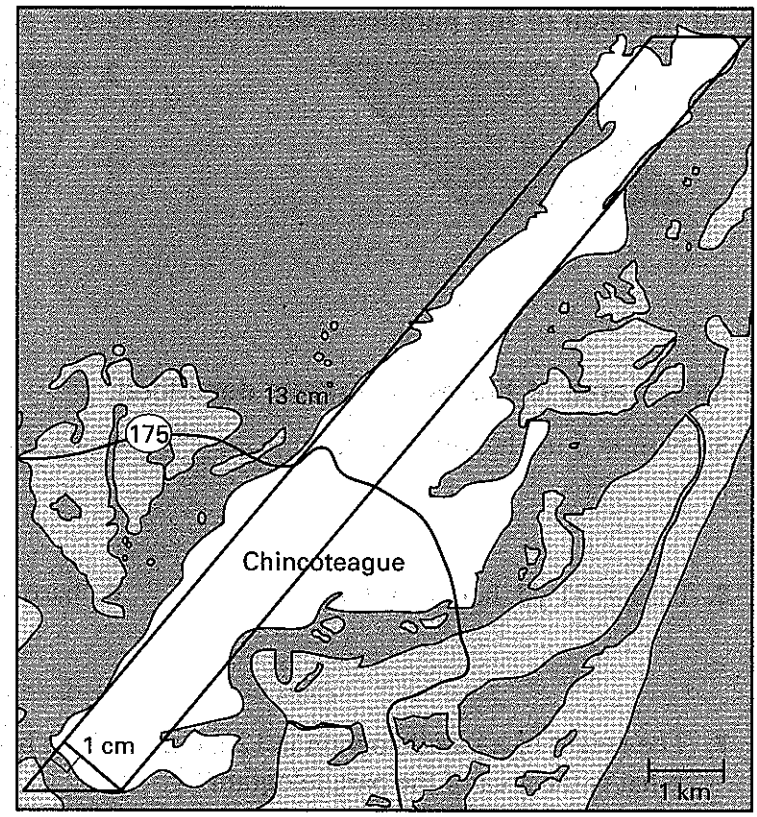
LESSON 10.1 Continued

Name _____ Date _____

Practice

For use with pages 475–479

11. A parallelogram can be used to approximate the shape of the island of Chincoteague off the coast of Virginia. Use the map and the scale at the right to approximate the area of the island.



12. Is the approximation you made in Exercise 11 a *low estimate* or a *high estimate*? Explain your reasoning.

LESSON 10.2

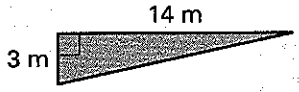
Name _____ Date _____

Practice

For use with pages 480–483

Find the area of the triangle.

1.



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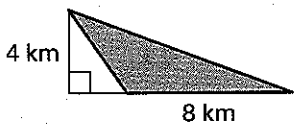
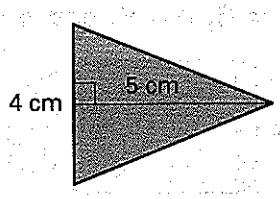
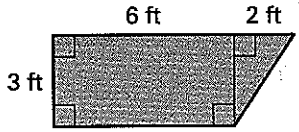


3.

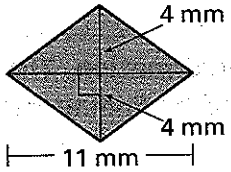


Find the area of the figure.

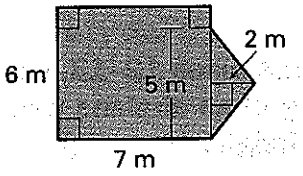
4.



5.



6.



Find the missing dimension of the triangle described.

7. area: 27 $in.^2$
base: 9 in.

8. area: 64 cm^2
height: 8 cm

9. area: 144 ft^2
base: 12 ft

LESSON 10.2 Continued

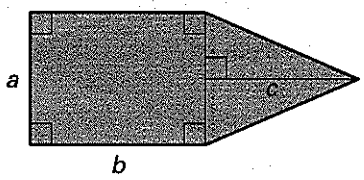
Name _____ Date _____

Practice

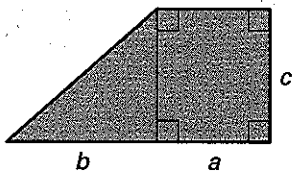
For use with pages 480–483

Find the area of the figure when the given lengths, in inches, are $a = 6$, $b = 8$, and $c = 7$.

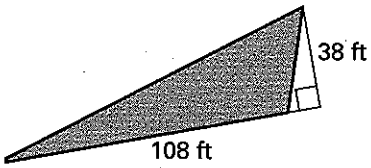
10.



11.



In Exercises 12–13, use the following information. The area of a wing of an airplane can be approximated by finding the area of a triangle.



12. Approximate the area of the wing shown.

13. What is the approximate area of both of the wings?

LESSON 10.3

Name _____ Date _____

Practice

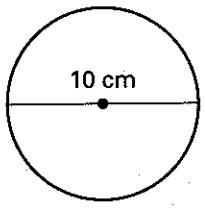
For use with pages 484–490

Match the vocabulary word to the correct definition.

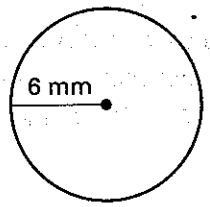
1. Radius	**A.** the distance across a circle through its center
2. Circumference	**B.** the distance around a circle
3. Center	**C.** the point that is the same distance from all the points of a circle
4. Diameter	**D.** the distance from the center to any point on a circle
5. Circle	**E.** the set of all points in a plane that are the same distance from a given point

Find the circumference of the circle.

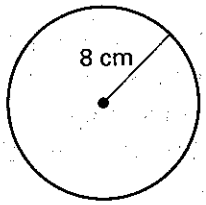
6.



7.



8.



Find the circumference of the circle described. Tell what value you used for π. Explain your choice.

9. $d = 6$ ft

10. $d = 12$ yd

11. $r = 14$ mm

LESSON 10.3 Continued

Name _____ Date _____

Practice

For use with pages 484–490

12. The diameter of an automobile tire is 23 inches. What is the circumference of the tire?

13. A round hat needs a ribbon to be put on it just above the brim. The radius of the hat is 4 inches. Is 28 inches of ribbon enough to wrap around this hat? Explain why or why not.

14. A man is buying a shirt. The shirt he wants comes only in whole number collar sizes like 14, 15, 16, and so on. The collar size is determined by the circumference of the collar in inches. If the man needs a size 16 collar, what is the approximate diameter of his neck?

15. You are making a spool to hold kite string when flying kites. The spool is round with a diameter of 7 centimeters. How many revolutions of the spool would you need to wind up a kite string that is 30 meters long?

16. The path that Earth follows around the Sun is called its orbit. Earth's orbit is nearly circular with a radius of about 150,000,000 km. What is the circumference of Earth's orbit?

LESSON 10.4

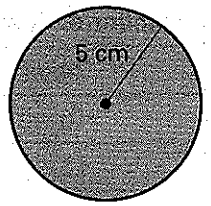
Name _____ Date _____

Practice

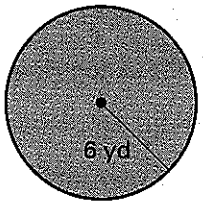
For use with pages 491–495

Find the area of the circle.

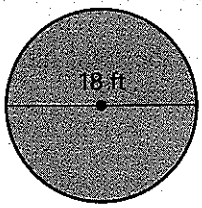
1.



2.



3.



Find the area of the circle described.

4. $r = 7$ cm

5. $r = 9$ km

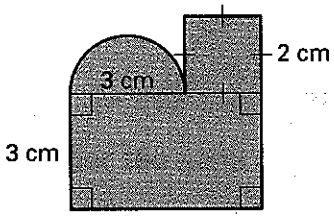
6. $d = 10$ yd

7. Find the area of a circle with a radius of 4.6 centimeters.

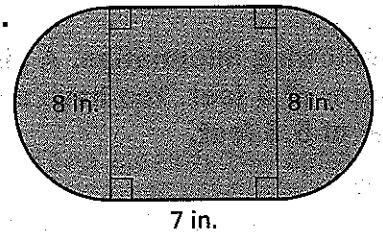
8. Find the area of a circle with a diameter of 25 millimeters.

Find the area of the figure.

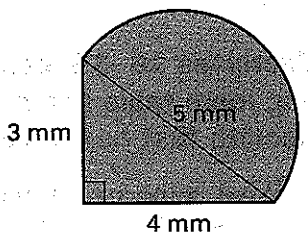
9.



10.



11.



LESSON 10.4 Continued

Name _____ Date _____

Practice

For use with pages 491–495

In Exercises 12–15, use the table that shows the types of flowers planted in a garden.

Flowers Planted	
Flower Type	**Number of Flowers**
Tulips	24
Daisies	16
Roses	12
Daffodils	12

12. What is the total number of flowers planted in the garden?

13. Write the fraction of all the flowers that are in each category.

14. Find the angle measures for the sectors of a circle graph.

15. Make a circle graph of the data.

In Exercises 16–18, use the following information. A circular dining room table has a diameter of 4 feet. You have a circular tablecloth that has a diameter of 5.5 feet.

16. What is the area of the table?

17. What is the area of the tablecloth?

18. How much extra material is left hanging over the edge of the table?

LESSON 10.5

Name _____ Date _____

Practice

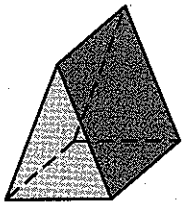
For use with pages 500–503

Match the word with its definition.

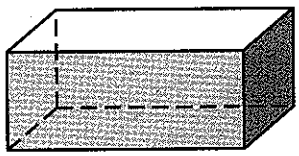
1. Solid	**A.** a point where edges of a solid meet
2. Face	**B.** one of the polygons that form a solid figure
3. Edge	**C.** a three dimensional figure that encloses a part of space
4. Vertex	**D.** a segment where two faces meet

Classify the solid. Then count the number of *faces*, *edges*, and *vertices*.

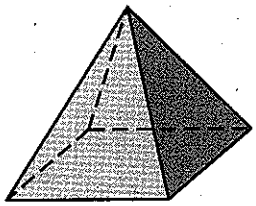
5.



6.



7.



Draw the solid described.

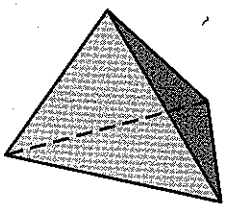
8. cone

9. triangular prism

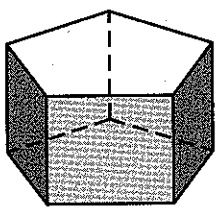
10. sphere

Tell whether the solid has a base. Then classify the solid.

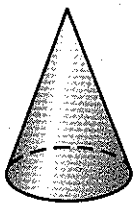
11.



12.



13.



LESSON 10.5 Continued

Name _____ Date _____

Practice

For use with pages 500–503

Tell whether the statement is *true* or *false*. If it is false, rewrite the statement to make it true.

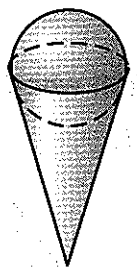
14. A cylinder has one base.

15. A cone has one vertex.

16. A sphere has no edges.

17. A rectangular prism has two faces.

18. An ice cream cone is shown at the right. What two types of solids are used to create this solid? How many faces, edges, and vertices does each of the two solids have?



LESSON 10.6

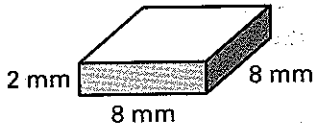
Name _____ Date _____

Practice

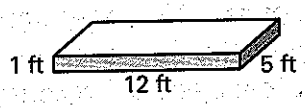
For use with pages 504–509

Find the surface area of the rectangular prism.

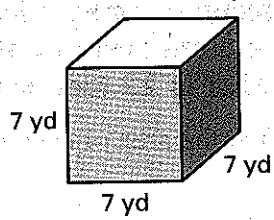
1.



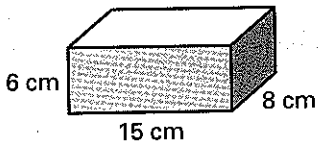
2.



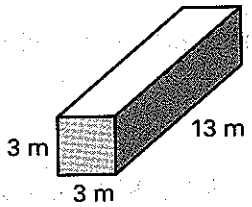
3.



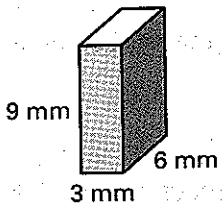
4.



5.



6.



Draw a diagram of the rectangular prism described. Then find the surface area.

7. 5 ft by 8 ft by 2 ft

8. 9 m by 4 m by 12 m

9. 10 cm by 7 cm by 5 cm

10. 15 yd by 11 yd by 6 yd

LESSON 10.6 Continued

Name _____ Date _____

Practice

For use with pages 504–509

In Exercises 11–14, use the following information. A magician is planning to make a building disappear. The magician needs to make a cloth cover for the building in the shape of a rectangular prism that is 22 feet wide, 28 feet long, and 14 feet high.

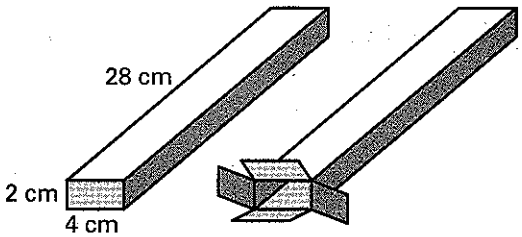
11. Find the area of each of the faces of the building.

12. Tell which face or faces do not need to be covered.

13. Find the surface area of the part of the building that will be covered.

14. The magician has 2000 square feet of cloth. Will this be enough to make the cover?

In Exercises 15 and 16, use the following information. A closed and an opened spaghetti box are shown in the diagram.



15. Find the surface area of the closed box.

16. The top and bottom flaps in the box shown at the right are each 4 centimeters by 2 centimeters. The right and left flaps are each 2 centimeters by 2 centimeters. There are flaps at the other end that are identical. Find the total area of cardboard used to make the box.

LESSON 10.7

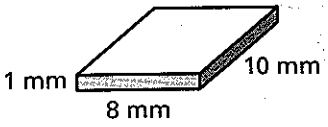
Name _____ Date _____

Practice

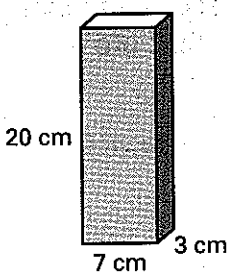
For use with pages 510–513

Find the volume of the rectangular prism.

1.



2.



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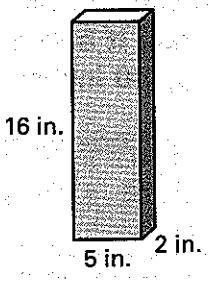


4. Find the volume of a rectangular prism that is 7 millimeters by 9 millimeters by 11 millimeters.

Find the missing dimension of the rectangular prism described.

5. volume: 144 ft^3
length: 4 ft
width: 3 ft

6. volume: 462 $in.^3$
width: 6 in.
height: 7 in.

7. volume: 154 $in.^3$
length: 11 in.
height: 2 in.

8. A walk-in closet is 5 feet by 8 feet by 5 feet. What is the volume of the closet?

9. A toy box has a total volume of 41,472 cubic inches. If the length is 48 inches and the width is 24 inches, what is the height of the toy box?

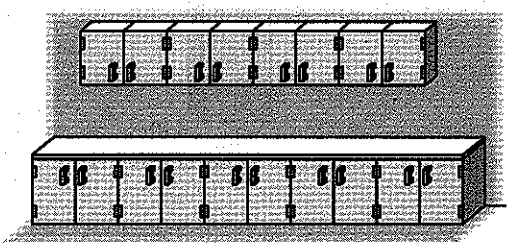
LESSON 10.7 Continued

Name _____ Date _____

Practice

For use with pages 510–513

In Exercises 10–12, use the following information. A kitchen has floor cabinets that are 24 inches deep, 24 inches wide, and 36 inches tall. It also has wall cabinets that are 12 inches by 24 inches by 30 inches.



10. What is the volume of a floor cabinet?

11. What is the volume of a wall cabinet?

12. The kitchen has 8 cabinets on the wall and 10 cabinets on the ground. What is the total volume of cabinet space in the kitchen?