Name: _____ Date: _____

CHAPTER TEST A

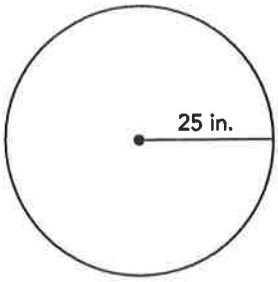
11 Circumference and Area of a Circle

25
Suggested Time: 30 min

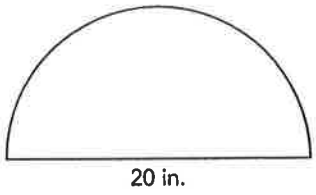
Concepts and Skills (5 × 2 points = 10 points)

Solve. Show your work.

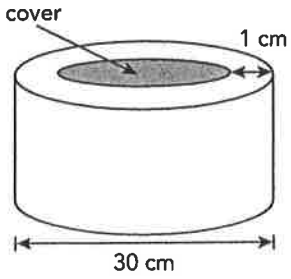
1. Find the circumference of a circle with radius 25 inches. Use 3.14 as an approximation for π.



2. Find the area of a semicircle with diameter 20 inches. Use $\frac{22}{7}$ as an approximation for π.



3. Find the area of the cover of the tin. Use $\frac{22}{7}$ as an approximation for π.



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Name: _____ Date: _____

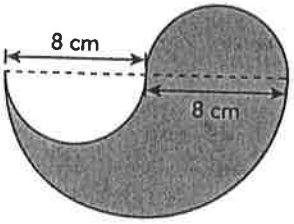
4. The circumference of a circular plate is 94.2 centimeters. Find the radius of the plate. Use 3.14 as an approximation for π.

5. The diameter of a bicycle wheel is 14 inches. What is the distance travelled in feet when the wheel makes 3 revolutions? Use $\frac{22}{7}$ as an approximation for π.

Problem Solving (Question 6: 3 points, Questions 7 to 9: 3 × 4 points = 12 points)

Solve. Show your work.

6. The figure is made up of three semicircles. Find the area of the shaded part. Use 3.14 as an approximation for π.



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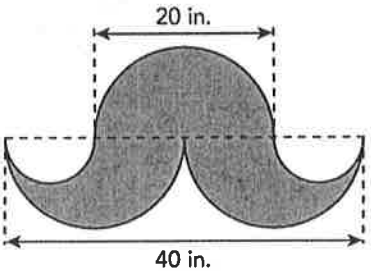
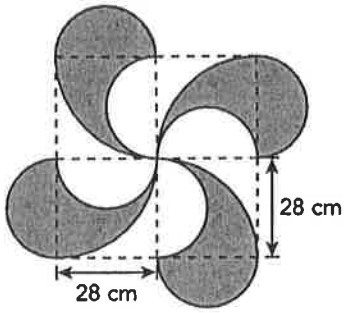
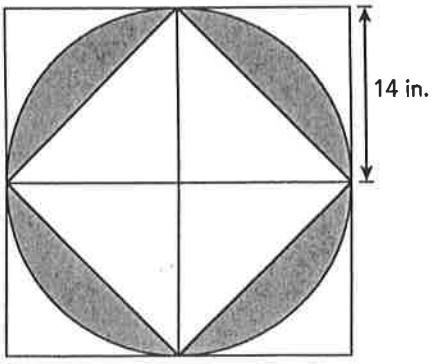
7. The figure is made up of three identical semicircles and another two identical smaller semicircles. Find the perimeter of the figure. Use 3.14 as an approximation for π.



8. Alex draws the design shown below. He wants to paint the shaded parts of the design. What is the total area of the shaded parts? Use $\frac{22}{7}$ as an approximation for π.



9. The figure is made up of four identical squares of side length 14 inches. A quadrant is drawn inside each square. Find the total area of the unshaded parts of the figure. Use $\frac{22}{7}$ as an approximation for π.



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Name: _____ Date: _____

CHAPTER TEST B

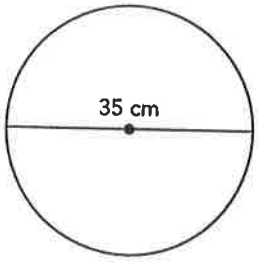
11 Circumference and Area of a Circle

25
Suggested Time: 30 min

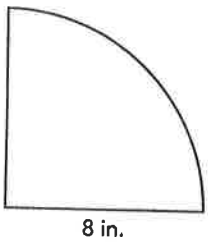
Concepts and Skills (5 × 2 points = 10 points)

Solve. Show your work.

1. Find the circumference of a circle with diameter 35 centimeters. Use $\frac{22}{7}$ as an approximation for π.



2. Find the area of a quadrant with radius 8 inches. Use 3.14 as an approximation for π.



3. The circumference of a circular table is 18.84 feet. Find the radius of the table. Use 3.14 as an approximation for π.

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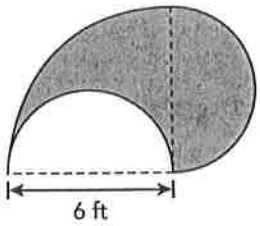
4. The area of a circular cover is 2,464 square centimeters. What is the diameter of the cover? Use $\frac{22}{7}$ as an approximation for π.

5. The diameter of a tricycle wheel is 7 inches. How many revolutions will the wheel need to turn to travel a distance of 11 feet? Use $\frac{22}{7}$ as an approximation for π.

Problem Solving (Question 6: 3 points, Questions 7 to 9: 3 × 4 points = 12 points)

Solve. Show your work.

6. The figure is made up of two semicircles and a quadrant. Find the area of the shaded part. Use 3.14 as an approximation for π.



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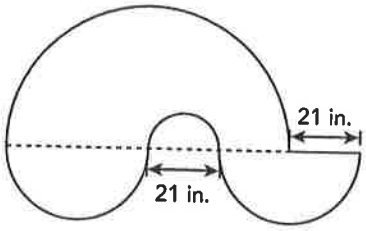
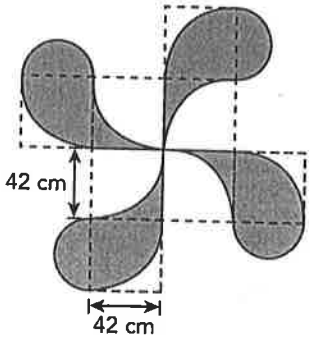
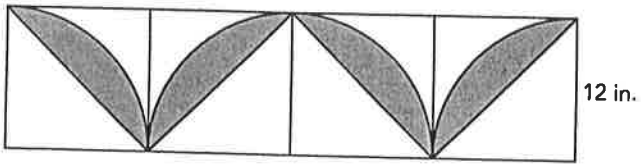
7. The figure is made up of a piece of wire. It consists of four semicircles and a straight line. The radius of the largest semicircle is 42 inches. The diameter of the smallest semicircle is 21 inches. The other two semicircles are each of radius 21 inches. Calculate the length of the wire. Use $\frac{22}{7}$ as an approximation for π.



8. Max draws the design shown below. He wants to paint the shaded part of the design. What is the total area of the shaded parts? Use $\frac{22}{7}$ as an approximation for π.



9. The figure is made up of four identical squares of side length 12 inches. A quadrant is drawn inside each square. Find the total area of the shaded parts of the figure. Use 3.14 as an approximation for π.



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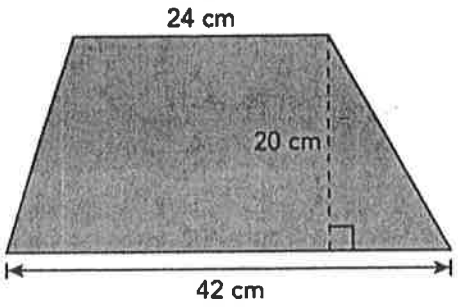
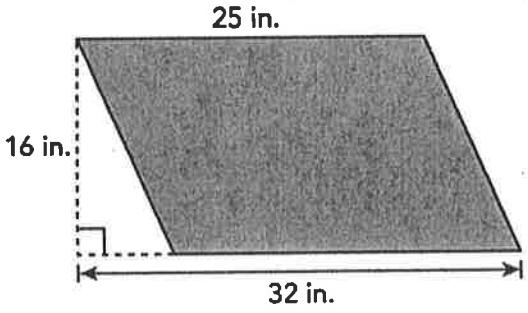
Questions from 8.1 and 8.5

1.) Find the area of the trapezoid.



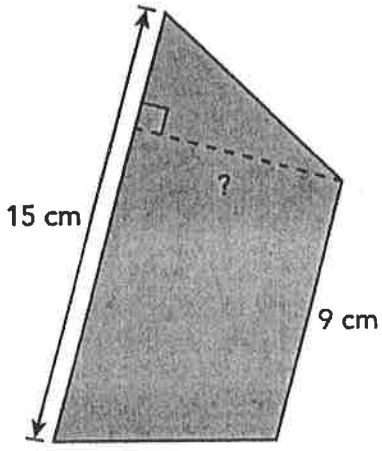
2.)

Find the area of the parallelogram.



3.)

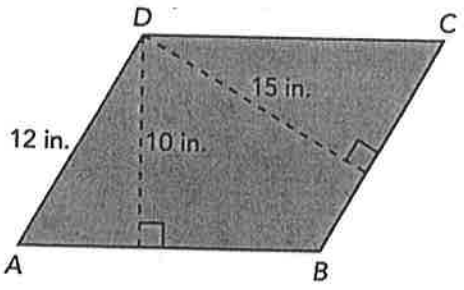
The area of the trapezoid is 84 square centimeters. Find the height of the trapezoid.



Questions from 8.1 and 8.5

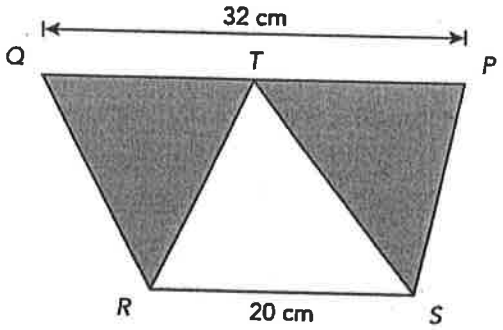
4.)

Figure *ABCD* is a parallelogram. Find the length of $\overline{AB}$.



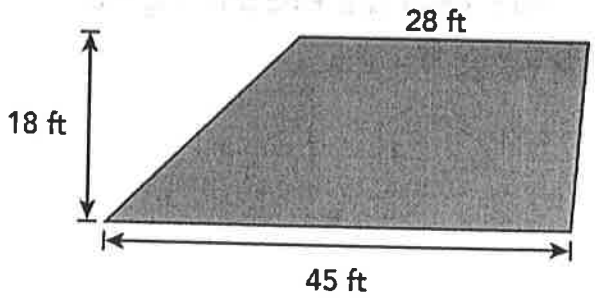
5.)

Figure *PQRS* is a trapezoid. The area of triangle *RST* is 170 square centimeters. Find the total area of the shaded regions.



6.)

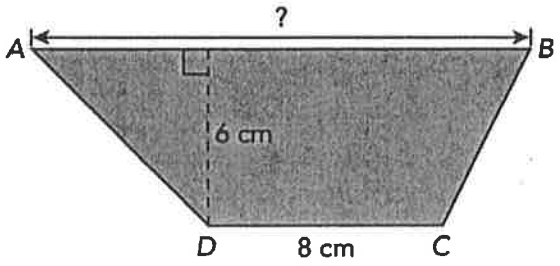
Find the area of the trapezoid.



Questions from 8.1 and 8.5

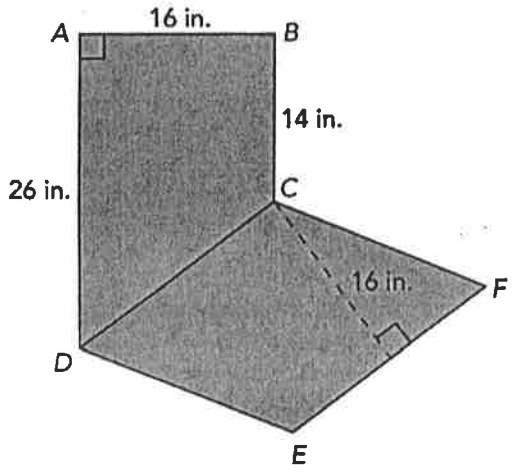
7.)

The area of the trapezoid is 75 square centimeters. Find the length of $\overline{AB}$.



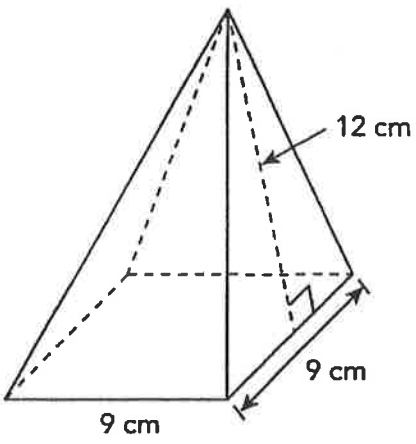
8.)

Figure *ABCD* is a trapezoid and figure *CDEF* is a parallelogram. The area of trapezoid *ABCD* is equal to the area of parallelogram *CDEF*. Find the length of $\overline{CD}$.



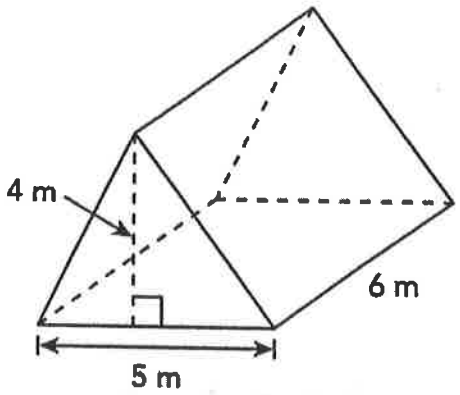
9.)

Find the surface area of the square pyramid.



10.)

Find the volume of the triangular prism.

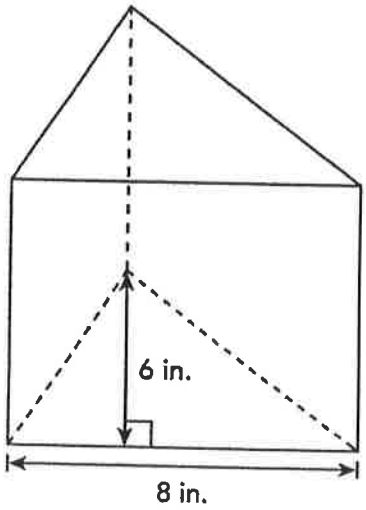


11.)

The area of one face of a cube is 64 square inches. Find the volume of the cube.

12.)

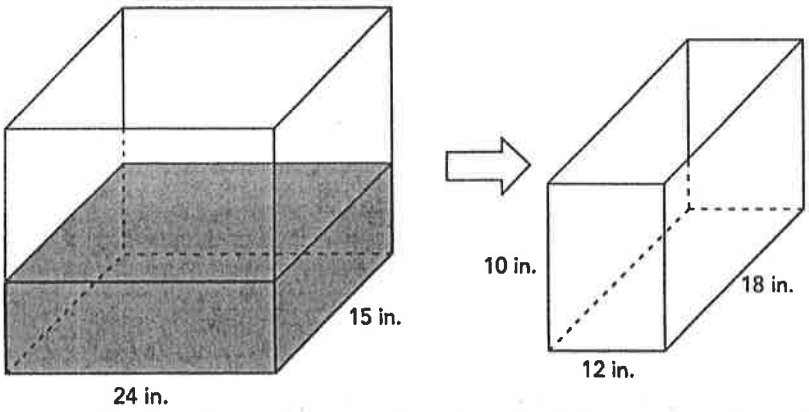
Find the height of the triangular prism given that its volume is 264 cubic inches.



Questions from 8.1 and 8.5

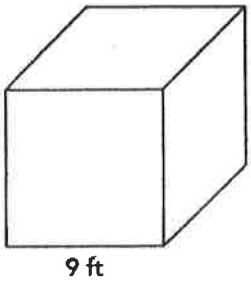
13.)

A rectangular container with a base of 24 inches by 15 inches is $\frac{1}{3}$-filled with water. If all the water is poured into an empty rectangular container, measuring 12 inches by 18 inches by 10 inches, it will fill the second container to its brim. What is the height of the first container?



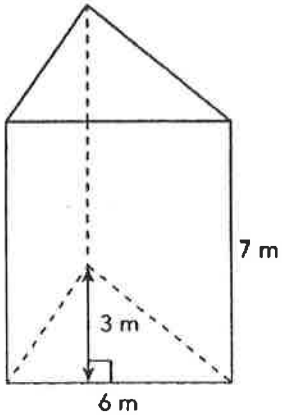
14.)

Find the surface area of the cube.



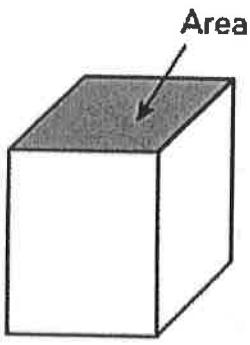
15.)

Find the volume of the triangular prism.



16.)

The area of the shaded face of the rectangular prism is 94 square inches. Find the height of the prism given that its volume is 1,128 cubic inches.



17.)

A rectangular container measuring 20 centimeters by 18 centimeters by 24 centimeters is partially filled with water. The container is completely filled to its brim after 3,600 cubic centimeters of water are poured into the container. How much water was in the container at first?