



Topic 2

Perimeter, Area, and Volume



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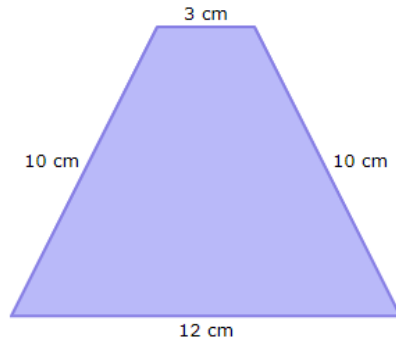
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Perimeter

1) Find the perimeter of this square.



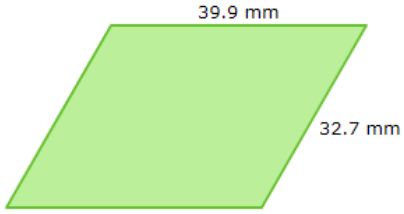
2) Find the perimeter.



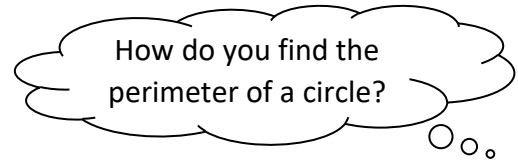
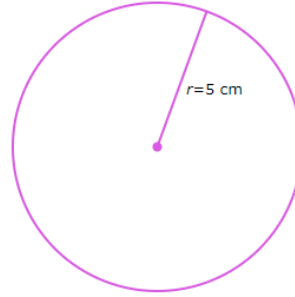
3) An equilateral triangle has a side with a length of 6 in. Find the perimeter of the triangle.

4) The length of a rectangle is 5 more than the width. What are the dimensions of the rectangle if the perimeter is 34?

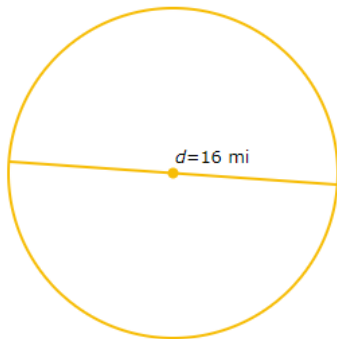
5) Find the perimeter.



6) Find the perimeter to the nearest tenth.



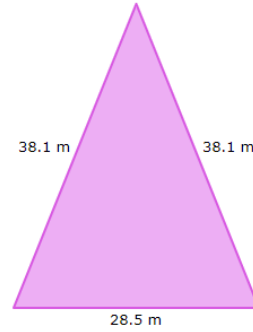
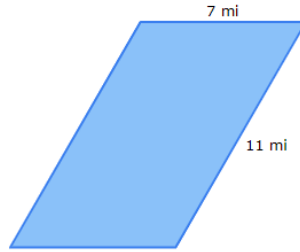
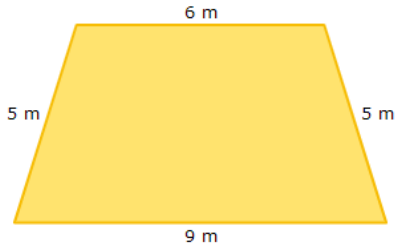
7) Find the circumference in terms of π .



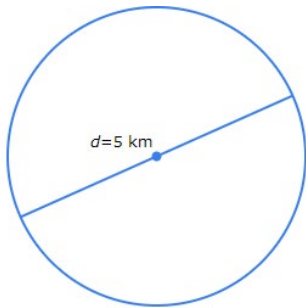
8) The circumference of a circle is 16π , find the length of the radius.




1) Find the perimeter of each of the following figures:



2) Find the circumference of the following circle in terms of π .

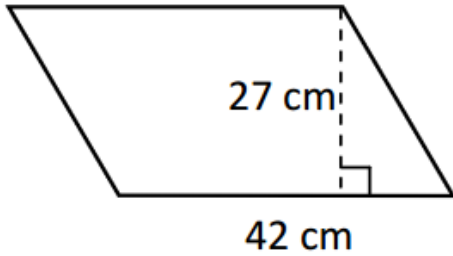


3) A triangle's sides are 5.6 m, 9.6 m, and 4.7 m. If a farmer wants to enclose the field with fencing, and fencing costs \$7.40 per meter, how much will it cost the farmer?

 Area	Shape	Area Formula
Rectangle		
Parallelogram		
Triangle		
Trapezoid		
Rhombus/Kite		
Circle		

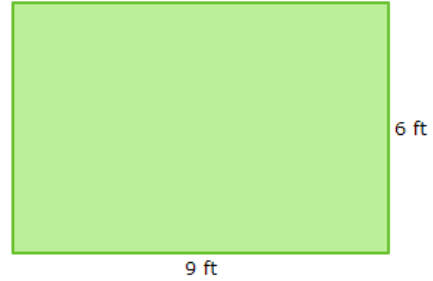
Examples

Find the area of each of the following figures below. If necessary, round your answers to the nearest tenth.



Shape:

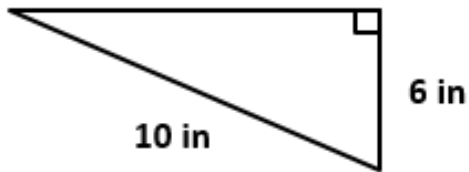
Area:



Shape:

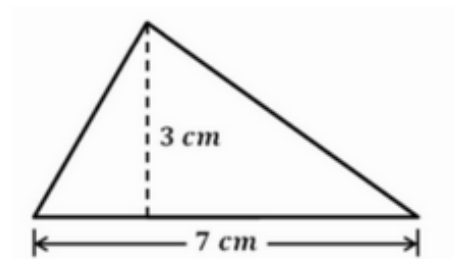
Area:

Challenge



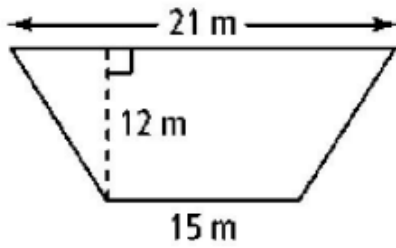
Shape:

Area:



Shape:

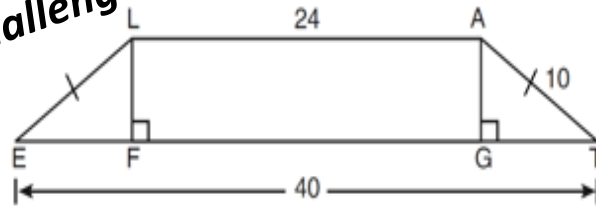
Area:



Shape:

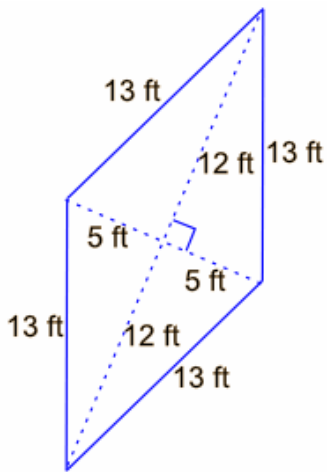
Area:

Challenge



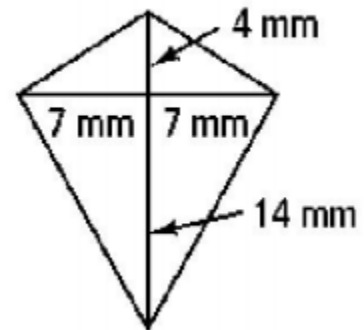
Shape:

Area:



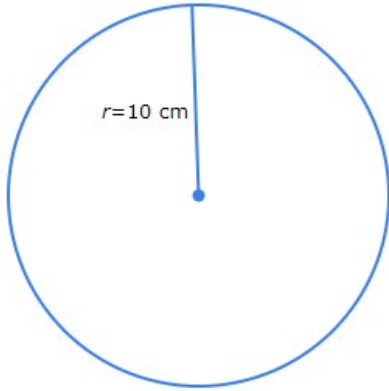
Shape:

Area:



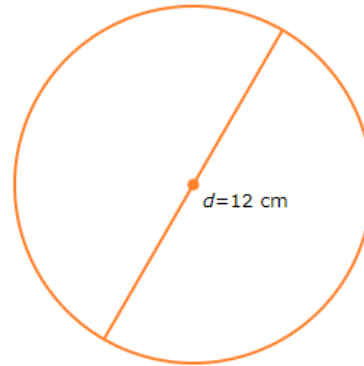
Shape:

Area:



Shape:

Area:



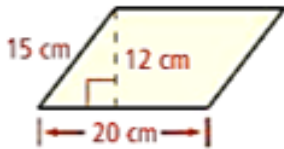
Shape:

Area:

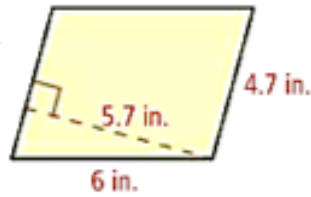
You try!

Find the area of each parallelogram.

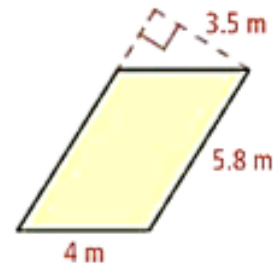
1.



2.



3.



Remember: The base must be perpendicular to the height!

Find the area of each triangle.

4.



5.



6.

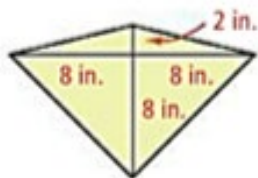


Find the area of each trapezoid. If your answer is not an integer, leave it in simplest radical form.

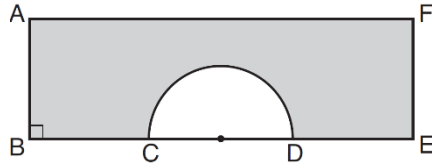
7.



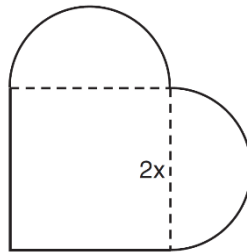
8. Find the area of the kite.



2. In the diagram below of rectangle $AFEB$ and a semicircle with diameter \overline{CD} , $AB = 5$ inches, $AB = BC = DE = FE$, and $CD = 6$ inches. Find the area of the shaded region, to the *nearest hundredth of a square inch*.



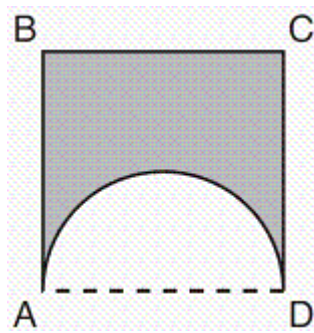
3. A patio consisting of two semicircles and a square is shown in the diagram below. The length of each side of the square region is represented by $2x$.



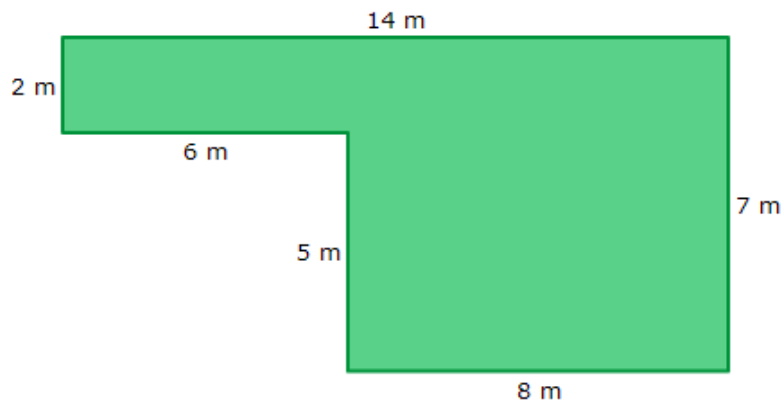
Write an expression for the area of the entire patio, in terms of x and π .

Write an expression for the perimeter of the entire patio, in terms of x and π

4. A figure consists of a square and a semicircle, as shown in the diagram below. If the length of a side of the square is 6, what is the area of the shaded region, to the nearest hundredth.

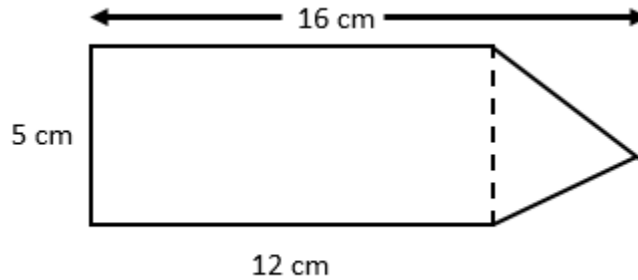


5. Find the area and perimeter of the following figure:

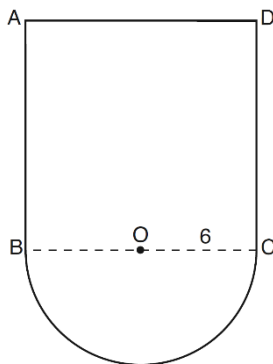




1. Find the area of the irregular figure shown below.



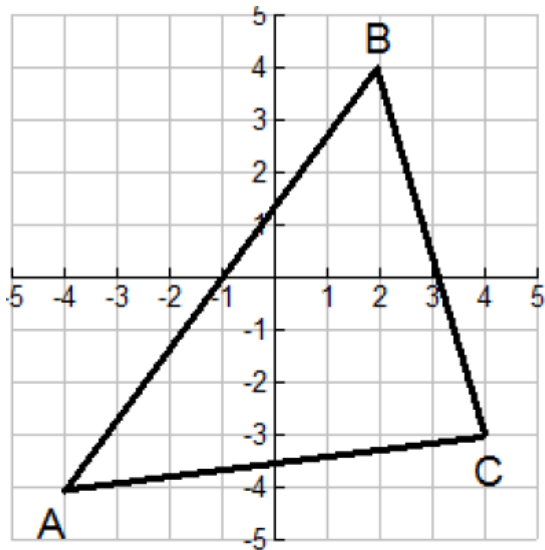
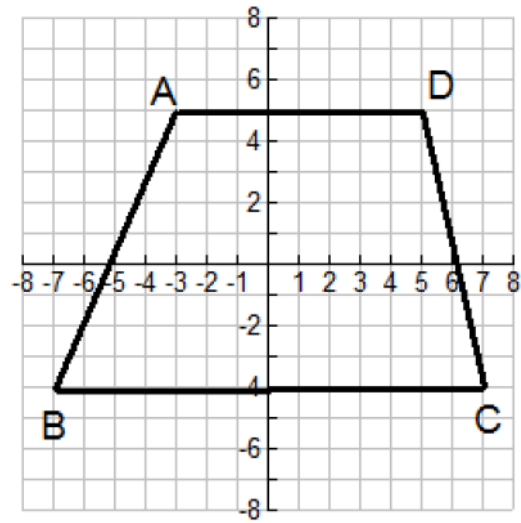
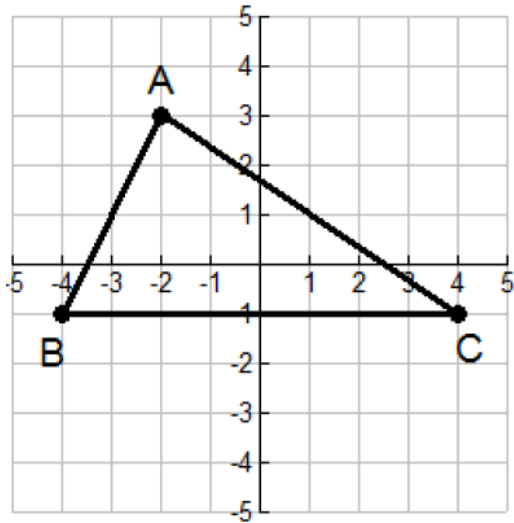
2. In the figure below, $ABCD$ is a square and semicircle O has a radius of 6 meters.
 - a) What is the area of the figure, in terms of π ?



- b) If the figure above represents the layout of a basketball court that needs to be repaved at a cost of \$14.98 per square meter, what is the cost to repave this area?

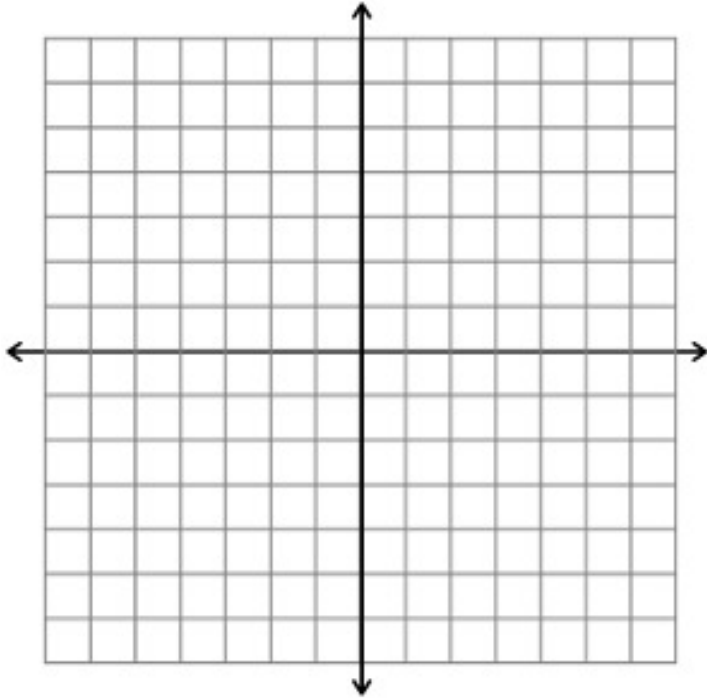
Area on the Coordinate Plane

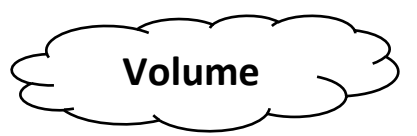
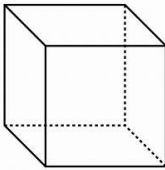
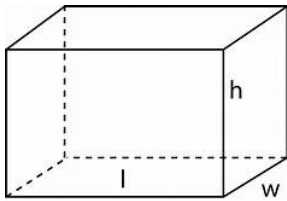
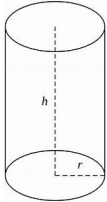
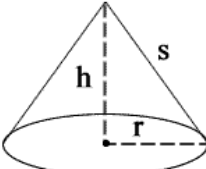
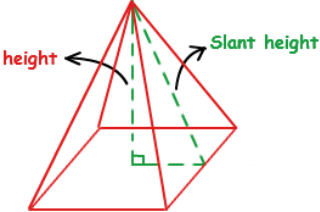
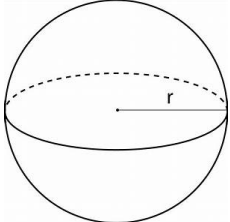
Find the area of each of the following figures.





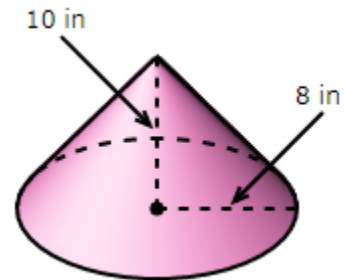
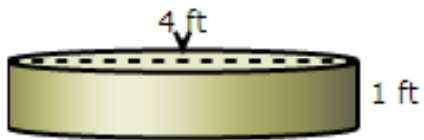
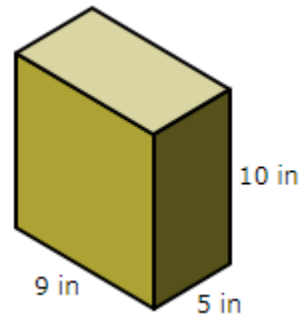
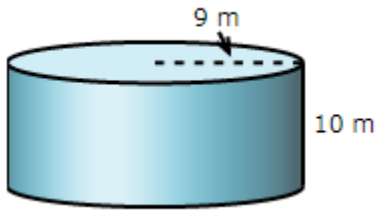
Find the area of $\triangle ABC$ whose vertices are $A(-2, -1)$, $B(3,1)$ and $C(1,3)$



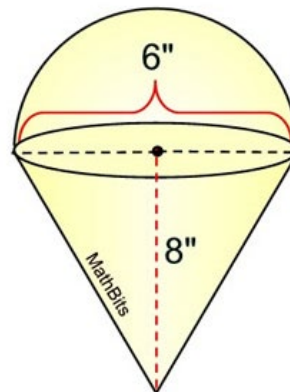
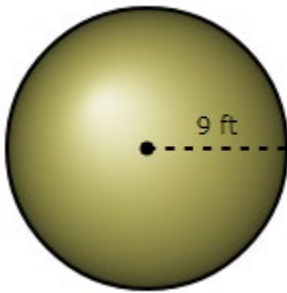
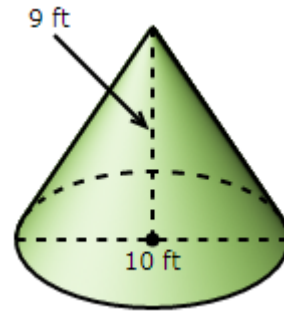
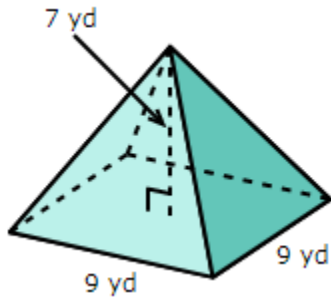
	Shape	Volume Formula
Cube		
Rectangular Prism		
Cylinder		
Cone		
Pyramid		
Sphere		

Examples

Find the volume of each of the following to the nearest hundredth.

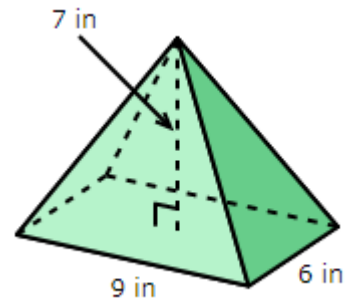
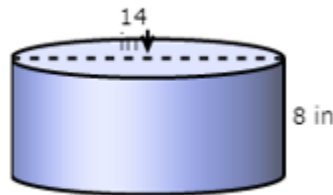
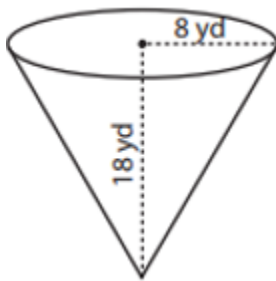
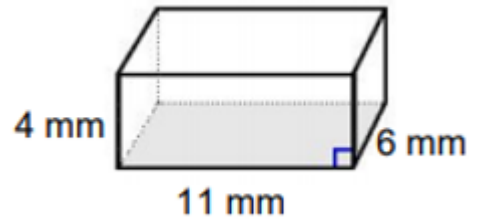
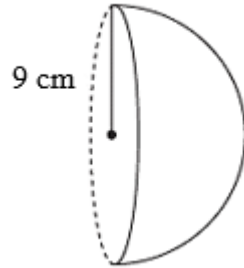
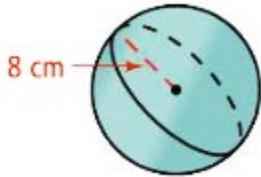


Find the volume of each of the following to the nearest tenth.





1) Find the volume of each of the following to the nearest hundredth.



- 2) A snack stand serves a small order of popcorn in a cone-shaped cup and a large order of popcorn in a cylindrical cup.
- a. Find the volume of the small cup to the nearest tenth.



- b. How many small orders of popcorn are in a large order of popcorn?

3. The automatic pet feeder pictured at the right is a right cylinder on top of a right cone of the same radius. The radius is 2.5 in, height of cylinder is 7.5 in, and height of cone is 4 in. Calculate the number of cups that can be placed in the feeder if $1 \text{ cup} = 14.4 \text{ in.}^3$.

