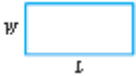

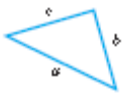
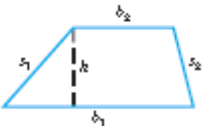


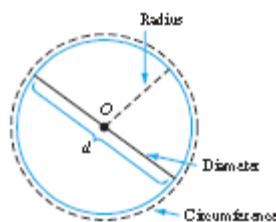
Applications: Geometry (Perimeter, Area, Circumference, Volume)

TYPE	FIGURE	Perimeter: The distance around a figure	Area: The number of square units enclosed within the figure
Rectangle		$P = 2l + 2w$	$A = lw$
Square		$P = 4s$	$A = s^2$
Triangle		$P = a + b + c$	$A = \frac{1}{2}bh$
Trapezoid		$P = s_1 + s_2 + b_1 + b_2$	$A = \frac{1}{2}h(b_1 + b_2)$

TRY:

Two frames are needed with the same perimeter; one frame in the shape of a square and one frame in the shape of an equilateral triangle. Each side of the triangle is 6 centimeters longer than each side of the square. Find the dimensions of each frame.

Circle – the perimeter is called a circumference; the diameter is a line segment that stretches from one side of the circle to the other passing through the center of the circle; the radius is the distance from the center of the circle to a point on the circle.



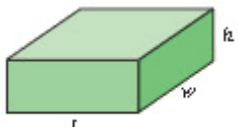
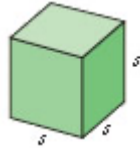
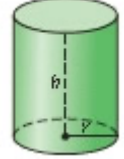
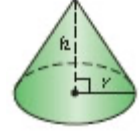
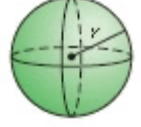
Circumference

$$C = 2\pi r \text{ or } C = \pi d$$

Area

$$A = \pi r^2$$

The amount of space contained by a three-dimensional object is known as **volume**.

<p>Rectangular Solid</p>  <p>$V = lwh$</p>	<p>Cube</p>  <p>$V = s^3$</p>	<p>Right Circular cylinder</p>  <p>$V = \pi r^2 h$</p>	<p>Right circular cone</p>  <p>$V = \frac{1}{3} \pi r^2 h$</p>	<p>Sphere</p>  <p>$V = \frac{4}{3} \pi r^3$</p>
--	---	--	---	---

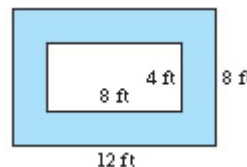
TRY:

The glass surface of a rectangular-shaped scanner has an area of 187 in^2 . Find the length of the largest piece of paper that will fit if the width of the scanner is 11 inches.

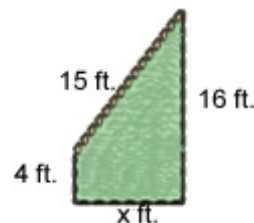
A sprinkler sprays water in a circle of radius 5 ft. Find the area of grass watered by this sprinkler using 3.14 for π and rounding to the nearest square foot.

CJ has a small rectangular fish tank that holds 1360 in^3 of water. Find the height of the tank if it is 17 inches long and 8 inches wide.

TL has a small 4 ft. by 8 ft. garden plot. He wants to extend the plot by 2 feet on each side making an 8 ft. by 12 ft. plot. Find the amount of additional area that TL will be adding (the shaded area in the picture).



A polygon is a closed figure consisting of three or more line segments. To determine the area of an oddly-shaped polygon, one may need to divide the figure into parts and determine each area separately. Given the figure to the right, find the amount of fencing needed to surround the plot if the total area is 90 ft^2 .



An arched window opening needs a new frame. Find the length of framing needed to go completely around the window. Use 3.14 for π . Round the final answer up to the nearest inch.

