
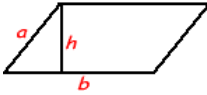
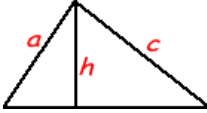
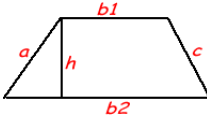
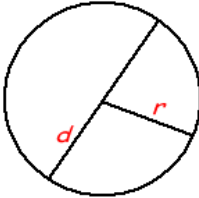
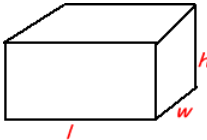
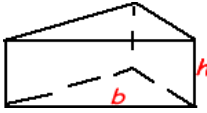
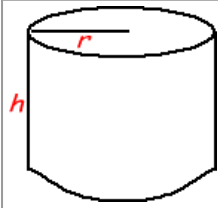


Measurement Formulas

A graphical list of the formulas for measurement concepts. Print this page for reference.

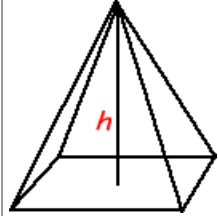
Shapes	Formula
	<p>Rectangle: Area = Length X Width $A = lw$</p> <p>Perimeter = 2 X Lengths + 2 X Widths $P = 2l + 2w$</p>
	<p>Parallelogram Area = Base X Height $a = bh$</p>
	<p>Triangle Area = 1/2 of the base X the height $a = 1/2 bh$ Perimeter = $a + b + c$ (add the length of the three sides)</p>
	<p>Trapezoid $A = \left(\frac{b1 + b2}{2}\right)h$ Perimeter = $a + b1 + b2 + c$ $P = a + b1 + b2 + c$</p>
	<p>Circle The distance around the circle is a circumference. The distance across the circle is the diameter (d). The radius (r) is the distance from the center to a point on the circle. (Pi = 3.14) $d = 2r$ $c = \pi d = 2 \pi r$ $A = \pi r^2$ (p=3.14)</p>
	<p>Rectangular Solid Volume = Length X Width X Height $V = lwh$ Surface = $2lw + 2lh + 2wh$</p>
	<p>Prisms Volume = Base X Height $v = bh$ Surface = $2b + Ph$ (<i>b is the area of the base P is the perimeter of the base</i>)</p>

**Cylinder**Volume = $\pi r^2 \times \text{height}$

$$V = \pi r^2 h$$

Surface = $2\pi \text{ radius} \times \text{height}$

$$S = 2\pi rh + 2\pi r^2$$

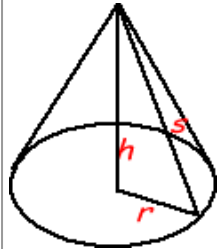
**Pyramid**

$$V = \frac{1}{3} bh$$

b is the area of the base

Surface Area: Add the area of the base to the sum of the areas of all of the triangular faces.

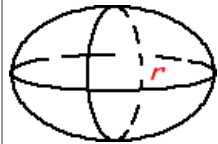
The areas of the triangular faces will have different formulas for different shaped bases.

**Cones**Volume = $\frac{1}{3} \pi r^2 \times \text{height}$

$$V = \frac{1}{3} \pi r^2 h$$

Surface = $\pi r^2 + \pi rs$

$$S = \pi r^2 + \pi rs$$
$$= \pi r^2 + \pi r \sqrt{r^2 + h^2}$$

**Sphere**Volume = $\frac{4}{3} \pi r^3$

$$V = \frac{4}{3} \pi r^3$$

Surface = $4\pi r^2$

$$S = 4\pi r^2$$