## FORMULAS FOR PERIMETER, AREA, SURFACE, VOLUME

Shapes	Formulas
W	Rectangle Area = Length X Width A = /w
/	<b>Perimeter</b> = 2 X Lengths + 2 X Widths P = 2 <i>l</i> + 2 <i>w</i>
a/h	Parallelogram Area = Base X Height A = bh
<u>b</u>	<b>Perimeter</b> = add the length of all sides $P = 2a + 2b$
a/h c	<b>Triangle Area</b> = $1/2$ of the base X the height $A = \frac{1}{2}bh$
	<b>Perimeter</b> = $a + b + c$ (add the length of the three sides)
a h	<b>Trapezoid Area</b> = $1/2$ of the base X the height $A = (\frac{b1+b2}{2})h$
b2	<b>Perimeter</b> = add lengths of all sides P = $a + b1 + b2 + c$
	Circle Radius = the distance from the center to a point on the circle (r).
	<b>Diameter</b> = the distance between two points on the circle through the center (d = 2r).
4	<b>Circumference</b> = the distance around the circle ( $C = \pi d = 2\pi r$ ). (Assume $\pi \approx 3.14$ )
	Area = $\pi r^2$
h	Rectangular Solid Volume = Length X Width X Height V = lwh
/ w	<b>Surface</b> = $2lw + 2lh + 2wh$

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h	Prisms Volume = Base X Height V = bh  Surface = 2b + Ph (b is the area of the base P is the perimeter of the base)
h	Cylinder Volume = $\pi r^2 X$ height $V = \pi r^2 h$ Surface = $2\pi$ radius X height $S = 2\pi rh + 2\pi r^2$
h	<b>Pyramid Volume</b> = $1/3$ area of the base X height $V = \frac{1}{3}bh$ b is the area of the base <b>Surface Area:</b> 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.
h	Cones Volume = 1/3 area of the base x height $V = \frac{1}{3} \pi r^2 h$ Surface $S = \pi r^2 + \pi r s$ $= \pi r^2 + \pi r \sqrt{r^2 + h^2}$
	Sphere Volume $V = \frac{4}{3} \pi r^3$ Surface $S = 4\pi r^2$