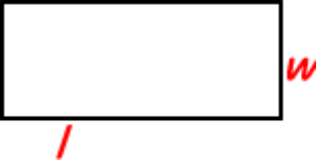
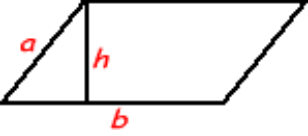
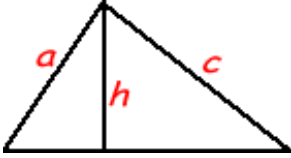
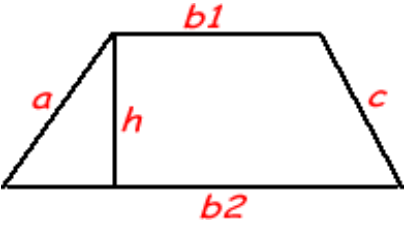
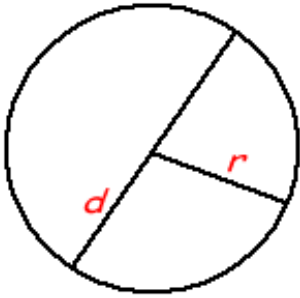
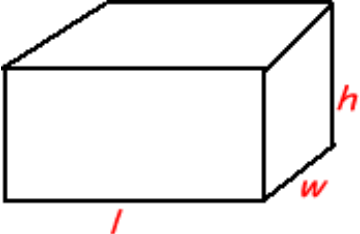
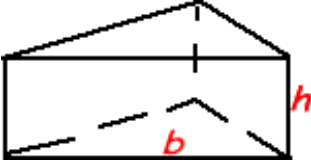
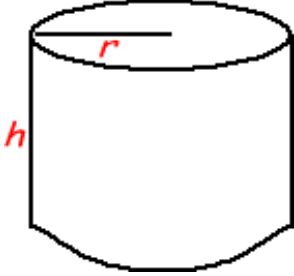
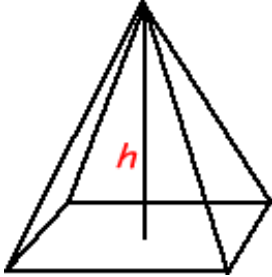
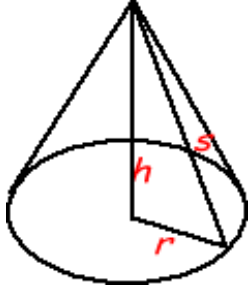
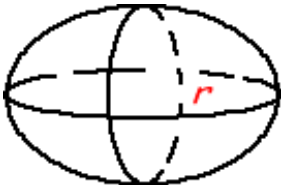


## FORMULAS FOR PERIMETER, AREA, SURFACE, VOLUME

| Shapes  | Formulas  |
|---|---|
|    | <p><b>Rectangle</b><br/> <b>Area</b> = Length X Width<br/> <math>A = lw</math></p> <p><b>Perimeter</b> = 2 X Lengths + 2 X Widths<br/> <math>P = 2l + 2w</math></p>   |
|    | <p><b>Parallelogram</b><br/> <b>Area</b> = Base X Height<br/> <math>A = bh</math></p> <p><b>Perimeter</b> = add the length of all sides<br/> <math>P = 2a + 2b</math></p>   |
|   | <p><b>Triangle</b><br/> <b>Area</b> = 1/2 of the base X the height<br/> <math>A = \frac{1}{2}bh</math></p> <p><b>Perimeter</b> = <math>a + b + c</math><br/>         (add the length of the three sides)</p>  |
|  | <p><b>Trapezoid</b><br/> <b>Area</b> = 1/2 of the base X the height<br/> <math>A = \left(\frac{b_1+b_2}{2}\right)h</math></p> <p><b>Perimeter</b> = add lengths of all sides<br/> <math>P = a + b_1 + b_2 + c</math></p>  |
|  | <p><b>Circle</b><br/> <b>Radius</b> = the distance from the center to a point on the circle (r).</p> <p><b>Diameter</b> = the distance between two points on the circle through the center (<math>d = 2r</math>).</p> <p><b>Circumference</b> = the distance around the circle (<math>C = \pi d = 2\pi r</math>).<br/>         (Assume <math>\pi \approx 3.14</math>)</p> <p><b>Area</b> = <math>\pi r^2</math></p> |
|  | <p><b>Rectangular Solid</b><br/> <b>Volume</b> = Length X Width X Height<br/> <math>V = lwh</math></p> <p><b>Surface</b> = <math>2lw + 2lh + 2wh</math></p>   |

## FORMULAS FOR PERIMETER, AREA, SURFACE, VOLUME

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