



Cobham Aluminium

GEOMETRIC FORMULAS

Shape	Formula
Circle	<p>Area = Square of Diameter x .7854 or Square of Radius x 3.1416</p> <p>Circumference = Diameter X 3.1416</p> <p>Diameter = Circumference X .3183</p> <p>Doubling diameter increases area four times, tripling diameter increases area nine times, etc.</p>
Square	<p>Area = Square of Side</p> <p>Diagonal = Side x 1.4142</p> <p>Side = Diagonal x .7071</p>
Square inscribed in Circle	<p>Side of Square = Diameter of Circle x .7071 or Circumference of Circle x .2251</p> <p>Diameter of Circle = Side of Square x 1.4142</p> <p>Circumference of Circle = Side of Square x 4.4429</p>
Square and Circle with Equal Area	<p>Side of Square = Diameter of Circle x .8862</p> <p>Diameter of Circle = Side of Square x 1.128</p> <p>Circumference of Circle = Side of Square x 3.545</p>
Rectangle	<p>Area = Length x Width</p> <p>Diagonal = Square root of sum of squares of Width and Length</p>
Triangle	<p>Area = Base x 1/2 of Perpendicular Height</p>
Hexagon (equal sides and angles)	<p>Area = Square of Distance across Flats x .866 or Square of Side x 2.598</p> <p>Side = 1/2 of Diagonal or Distance across Flats x .577</p> <p>Diagonal = Distance across Flats x 1.155 or Side x 2</p>
Octagon (equal sides and angles)	<p>Area = Square of Distance across Flats x .828 or Square of Side x 4.828</p> <p>Side = Diagonal x .383 or Distance across Flats x .414</p> <p>Diagonal = Distance across Flats x 1.082 or Side x 2.613</p>
Sphere	<p>Area of Surface = Square of Diameter x 3.1416</p> <p>Volume = Cube of Diameter x .5236</p>
Cube	<p>Area of Surface = Square of Side x 6</p> <p>Volume = Cube of Side</p> <p>Diagonal = Side x 1.732</p>
Cylinder	<p>Area of Curved Surface = Diameter x Length x 3.1416</p> <p>Volume = Square of Diameter x Length x .7854</p>
Cone	<p>Area of Curved Surface = Diameter of Base X Slant Height x 1.5708</p> <p>Volume = Diameter of Base Squared x Perpendicular Height x .2618 or Area of Base x 1/3 Perpendicular Height</p>
Pyramid	<p>Lateral Surface Area (not incl. base) = Perimeter of Base x 1/2 of Slant Height</p> <p>Volume = Area of Base x 1/3 Perpendicular Height</p>