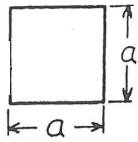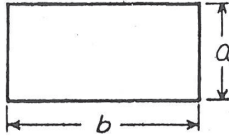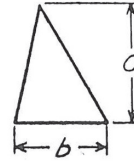# MATHEMATICAL FORMULAS

Area of a square=a x a
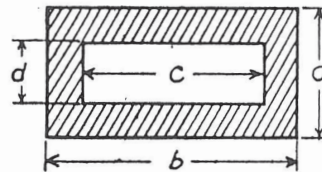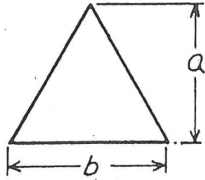
Area of a rectangle=a x b

Area of a Triangle=$\frac{a \times b}{2}$

Equilateral triangles
a=.866 x b
Area=$\frac{.866 \times b \times b}{2}$

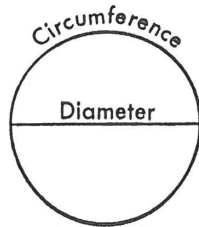Area of a hollow rectangle=(a x b) − (d x c)

Circles

Circumference equals 3.1416 x D

Diameter equals $\frac{Circumference}{3.1416}$

Area equals 1.1416 (D x D) or 3.1416 R2 or .7854 D2 or .0796 (circumference)2

Length of and arc equals number of degrees x diameter x 0.008727

To find side of an inscribed square multiply diameter by 0.7071 or multiply circumference by 0.2251 or divide circumference by 4.4428

The side of inscribed cube equals radius of sphere x 1.1547

To find side of an equal square multiply diameter by .8862

Square: The thickness multiplied by 1.155 equals diameter of its circumscribing circle

Hexagon: The thickness multiplied by 1.155 equals diameter of the circumscribing circle

Octagon: The thickness multiplied by 1.082 equals the diameter of the circumscribing circle

A side of a square multiplied by 4.443 equals circumference of its circumscribing circle; multiplied by 1.128 equals diameter of a circle of equal area multiplied by 3.547 equals circumference of a circle of equal area.

Area of a Parallelogram = Base x Altitude

Area of a Trapezoid = ½ the sum of the parallel sides x perpendicular height