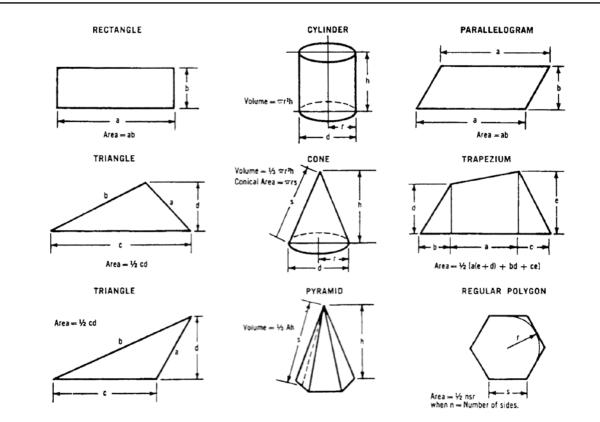## Engineering Data

FORMULAS

Area of a square = length x breadth or height.
Area of a rectangle = length x breadth or height.
Area of a triangle = base x ½ altitude.
Area of parallelogram = base x altitude.
Area of trapezoid = altitude x ½ the sum of parellel sides.
Area of trapezium = divide into two triangles, total their areas.
Circumference of circle = diameter x 3.1416.
Circumference of cirle = radius x 6.283185.
Diameter of circle = circumference x .3183.
Diameter of circle = square root of area x 1.12838.
Radius of circle = circumference x .0159155.
Area of a circle = half diameter x half circumference.
Area of a circle = square of diameter x .7854.
Area of a circle = square of circumference x .07958.
Area of a sector of circle = length of arc x ½ radius.
Area of a segment of circle = area of sector of equal radius-
area of a triange, when the segment is less, and plus area
of triangle, when segment is greater than the semi-circle.
Area of circular ring = sum of the diameter of the two circles x
   difference of the diameter of the two circles and that
   product x .7854.
Side of square that shall equal area of circle = circumference x .2821.
Diameter of circle that shall contain area of a given square =
   side of square x 1.1284.
Side of inscribed equilateral triange = diameter x .86.
Side of inscribed square = diameter x .7071.

Side of inscribed square = circumference x .225.
Area of ellipse = product of the two diameters x .7854.
Area of a parabola = base x ⅔ of a altitude.
Area of a regular polygon = sum of its sides x
perpendicular from its center to one of its sides divided by 2.
Surface of sphere = diameter x circumference.
Solidity of sphere = surface x 1/6 diameter.
Solidity of sphere = cube of diameter x .5236.
Solidity of sphere = cube of radius x 4.1888.
Solidity of sphere = cube of circumference x .016887.
Diameter of sphere = cube root of solidity x 1.2407.
Diameter of sphere = square root of surface x .56419.
Circumference of sphere = square root of surface x 1.772454.
Circumference of sphere = cube root of solidity x 3.8978.
Contents of segment of sphere = (height squared plus
three times the square of radius of base) x (height x .5236).
Side of inscribed cube of sphere = radius x 1.1547.
Side of inscribed cube of sphere = square root of diameter.
Contents of pyramid or cone = area of base x ⅓ altitude.
Contents of frustum or pyramid or cone = multiply areas
of two ends together and extract square root. Add to
this root the two areas and x ⅓ altitude.
Contents of a wedge = area of base x ⅛ altitude.

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