



To find circumference of circle,
multiply diameter by 3.1416

To find diameter of a circle,
multiply circumference by .31813

To find area of a circle,
multiply square of diameter by .7854

Area of a rectangle equals length multiplied by breadth.

Doubling the diameter of a circle
increases its area four times.

To find area of a triangle,
multiply base by 1/2 perpendicular height.

Area of ellipse equals
product of both diameters times .7854

Area of a parallelogram equals base times altitude.

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

Side of inscribed cube.
equals radius of sphere times 1.1547

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

Square: A side multiplied by 1.4142 equals diameter
or its circumscribing circle.
A side multiplied by 4.443 equals the
circumference of its circumscribing circle.
A side multiplied by 1.128 equals diameter
of an equal circle.
A side multiplied by 3.547 equals
circumference of an equal circle.

FLOW:

1 gal. per min = 0.134 cu. ft. per min.
= 500 lb. per hr. x sp. gr.

500 lb. per hr. = 1 gal per min % sp. gr.

1 cu. ft. per min. = 448.8 gal. per hr.

PRESSURE:

1 lb. per sq. in. = 2.31 ft. water at 60°F.
= 2.04 in. hg at 60°F.

1 ft. water at 60°F = 0.4333 lb. per eq. in.
= 0.0884 in. hg at 60°F

1 in. hg at 60°F = 0.49 lb. per eq. in.
= 1.13 ft. water at 60°F

1 lb. per sq. in. = lb. per eq. in. gauge
+14.7 Absolute

To find cubic inches in a ball,
multiply cube of diameter by .5236

To find cubic contents of a cone,
multiply area of base by 1/3 the altitude.

Surface of frustum of cone or pyramid equals sum of
circumference of both ends times 1/2 slant
height plus area of both ends.

To find contents of frustum of cone or pyramid
multiply area of two ends and get square root.
Add the two areas and times 1/3 altitude.

Doubling the diameter of a pipe increases
its capacity four times.

A gallon of water (U.S. Standard) weighs 8.33 lbs.
and contains 231 cubic inches

A cubic foot of water contains 7.50 gallons,
1728 cubic inches, and weighs 62.41 lbs.

To find the pressure in pounds per square inch of a col
umn of water, multiply the height of the column
in feet by .434.

Steam rising from water at its boiling point (212°F) has a
pressure equal to the atmosphere (14.7 lbs. to
the square inch).

A standard horse power: The evaporation of 30 lbs. or
water per hour from a feed water temperature of
100°F into steam at 70 lbs. gauge pressure.

To find capacity (in U.S. gallons) of tanks any size,
given dimensions of a cylinder in inches, square
the diameter, multiply by the length and by
.0034

To ascertain heating surface in tubular boilers,
multiply 2/3 the circumference of boiler by
length of boiler in inches and add it to the area
of all the tubes.

TEMPERATURE:

°C = (°F-32) x .556
°F = C(1.8) +32

VOLUME:

1 gal (U.S.) = 128 fl. oz. (U.S.)
= 231 cu. in.
= 0.833 gal. (Brit.)

1 cu. ft. = 7.48 gal. (U.S)

MASS:

1 lb. (avoir) = 16 oz. (avoir)
= 7000 grain

1 ton (short) = 2000 lb.

1 ton (long) = 2240 lb.