Formulas and Conversions

MEASUREMENT

Distance
1 *foot* (ft.) = 12 *inches* (in.)
1 *yard* (yd.) = 3 *feet*
1 *mile* (mi.) = 5,280 *feet*
1 *mile* ≈ 1.61 *kilometers* (km.)
1 *inch* = 2.540 *centimeters* (cm.)
1 *foot* = 0.3048 *meters* (m.)
1 *meter* = 1,000 *millimeters* (mm.)
1 *meter* = 100 *centimeters*
1 *kilometer* = 1,000 *meters*
1 *kilometer* ≈ 0.62 miles

Area
1 *square foot* (sq. ft.) = 144 *square inches* (sq. in.)
1 *square yard* (sq. yd.) = 9 *square feet*
1 *acre* = 43,560 *square feet*

Volume
1 *cup* (C.) = 8 *fluid ounces*
1 *quart* (qt.) = 2 *pints* (pt.) = 4 *cups*
1 *gallon* (gal.) = 4 *quarts*
1 *gallon* (gal.) = 231 *cubic inches* (cu. in.)
1 *liter* (l.) ≈ 0.264 *gallons* = 1.056 *quarts*
1 *cubic foot* (cu. ft.) = 1,728 *cubic inches*
1 *cubic foot* = 7.48 *gallons*
1 *cubic yard* (cu. yd.) = 27 *cubic feet*
1 *board foot* = 1 *inch* by 12 *inches* by 12 *inches*

Weight
1 *ounce* (oz.) ≈ 28.350 *grams* (g.)
1 *pound* (lb.) = 16 *ounces*
1 *pound* ≈ 453.592 *grams*
1 *milligram* (mg.) = 0.001 *grams*
1 *kilogram* (kg.) = 1,000 *grams*
1 *kilogram* ≈ 2.2 *pounds*
1 *ton* = 2,000 *pounds*

Temperature
$^{\circ}\mathbf{C} = .56(^{\circ}\mathbf{F} - 32)$ **or** $5/9(^{\circ}\mathbf{F} - 32)$
$^{\circ}\mathbf{F} = 1.8(^{\circ}\mathbf{C}) + 32$ **or** $(9/5 \times {}^{\circ}\mathbf{C}) + 32$

Electricity
1 *kilowatt-hour* = 1,000 *watt-hours*
amps = watts / volts

FORMULAS
(**x** is used to indicate multiply
pi is equal to 3.14)

Rectangle
perimeter = 2(length + width)
area = length x width

Rectangular Solid (Box)
volume = length x width x height

Cube
volume = $(\text{length of side})^3$

Triangle
sum of angles = 180°
area = ½ (base x height)

Circle
number of degrees in a circle = 360°
circumference ≈ 3.14 x diameter **or**
pi x diameter
area ≈ 3.14 x $(\text{radius})^2$ **or**
pi x $(\text{radius})^2$

Cylinder
volume ≈ 3.14 x $(\text{radius})^2$ x height **or**
pi x $(\text{radius})^2$ x height

Cone
volume ≈ $\frac{3.14 \times (\text{radius})^2 \times \text{height}}{3}$

Sphere (Ball)
volume ≈ $\frac{4}{3} \times 3.14 \times (\text{radius})^3$