

REFERENCE TABLES

In the metric system of measurements, the principal unit for length is the meter; the principal unit for capacity, the liter; and the principal unit for weight, the gram. The following prefixes are used for sub-divisions and multiples: milli = 1/1000; centi = 1/100; deci = 1/10; deca = 10; hecto = 100; kilo = 1000. In abbreviations, the sub-divisions are frequently used with a small letter and the multiples with a capital letter, although this practice is not universally followed everywhere where the metric system is used.

All the multiples and sub-divisions are not used commercially. Those ordinarily used for length are kilometer, meter, centimeter and millimeter; for

capacity, square meter, square centimeter and square millimeter; for cubic measures, cubic meter, cubic decimeter (liter), cubic centimeter, and cubic millimeter. The most commonly used weights are the kilogram and gram. The metric system was legalized in the United States by an Act of Congress in 1866.

THE METRIC SYSTEM OF MEASUREMENTS & CONVERSION TABLE

MEASURES OF LENGTH

10 millimeters (mm.)	= 1 centimeter (cm.)
10 centimeters	= 1 decimeter (dm.)
10 decimeters	= 1 meter (m.)
1000 meters	= 1 kilometer (km.)

SQUARE MEASURE

100 square millimeters (mm.2)	= 1 square centimeter (cm.2)
square centimeters	= 1 square decimeter (dm.2)
100 square decimeters	= 1 square meter (m.2)

SURVEYOR'S SQUARE MEASURE

100 square meters(m.2)	= 1 are (ar.)
100 ares	= 1 hectare (har.)
100 hectares	= 1 square kilometer (Km.2)

CUBIC MEASURE

1000 cubic millimeters (mm.3)	= 1 cubic centimeter(cm.3)
1000 cubic centimeters	= 1 cubic decimeter (dm.3)
cubic decimeters	= 1 cubic meter (m.3)

DRY AND LIQUID MEASURE

10 milliliters (ml.)	= 1 centiliter (cl.)
10 centiliters	= 1 deciliter (dl.)
10 deciliters	= 1 liter (l.)
100 liters	= 1 hectoliter (Hl.)
1 liter = 1 cubic decimeter = the volume of 1 kilogram of pure water at a temperature of 39.2 degrees F.	

MEASURES OF WEIGHT

10 milligrams (mg.)	= 1 centigram (cg.)
10 centigrams	= 1 decigram (dg.)
10 decigrams	= 1 gram (g.)
10 grams	= 1 decagram (Dg.)
10 decagrams	= 1 hectogram (Hg.)
10 hectograms	= 1 kilogram (Kg.)
1000 kilograms	= 1 (metric) ton (T.)

METRIC AND ENGLISH CONVERSION TABLE

LINEAR MEASURE

1 kilometer	= 0.6214 mile = 39.37 inches
1 meter	= 3.2808 feet = 1.0936 yard
1 centimeter	= 0.3937 inch
1 millimeter	= 0.03937
1 mile	= 1.609 kilometer
1 yard	= 0.9144 meter
1 foot	= 0.3048 meter
1 foot	= 304.8 millimeters
1 inch	= 2.542 centimeters
1 inch	= 25.4 millimeters

SQUARE MEASURE

1 sq. kilometer	= 0.3861 square mile = 247.1 acres.
1 hectare	= 2.471 acre = 107,640 square feet.
1 are	= 0.0247 acre = 1076.4 square feet.
1 sq. meter	= 10.764 square feet = 1.196 square yard.
1 sq. centimeter	= 0.155 square inch.
1 sq. millimeter	= 0.00155 square inch.
1 square mile	= 2.5899 square kilometers.
1 acre	= 0.4047 hectare = 40.47 ares.
1 sq. yard	= 0.836 square meter.
1 sq. foot	= 0.0929 square meter = 929 sq. centimeters.
1 sq. inch	= 6.452 square centimeters = 645.2 square millimeters.

CUBIC MEASURE

1 cubic meter	= 35.314 cubic feet = 1.308 cubic yard
1 cubic meter	= 264.2 U.S. gallons
1 cubic centimeter	= 0.061 cubic inch
1 liter (cubic decimeter)	= 0.0353 cubic foot = 61.023 cubic inches
1 liter	= 0.2642 U.S. gallon = 1.0567 U.S. quart
1 cubic yard	= 0.7645 cubic meter
1 cubic foot	= 0.02832 cubic meter = 28.317 liters
1 cubic inch	= 16.38716 cubic centimeters
1 U.S. gallon	= 3.785 liters
1 U.S. quart	= 0.946 liter

WEIGHT

1 metric ton	= 0.9842 ton (of 2240 pounds) = 2204.6 pounds
1 kilogram	= 2.2046 pounds = 35.274 ounces avoirdupois
1 gram	= 0.03215 ounce troy = 0.03527 ounce avoirdupois
1 gram	= 15.432 grains
1 ton (2240 pounds)	= 1.016 metric ton = 1016 kilograms
1 pound	= 0.4536 kilogram = 453.6 grams
1 ounce	
avoirdupois	= 28.35 grams
1 ounce troy	= 31.103 grams
1 grain	= 0.0648 gram
1 kilogram per square millimeter	= 1422.32 pounds per square inch
1 kilogram per square centimeter	= 14.223 pounds per square inch
1 kilogram-meter	= 7.233 foot-pounds
1 pound per square inch	= 0.0703 kilogram per square centimeter
1 calorie (kilogram calorie)	= 3.968 B.T.U. (British Thermal Unit)

