

Weights and Measures

Traditional Metric Measures

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 (mm²) = 1 square centimeter (cm²).

100 square centimeters = 1 square decimeter (dm²).

100 square decimeters = 1 square meter (m²).

Surveyor's Square Measure

100 square meters (m²) = 1 are (a)

100 ares = 1 hectare (ha).

100 hectares = 1 square kilometer (Km²).

Cubic Measure

1000 cubic millimeters (mm³) = 1 cubic centimeter (cm³).

1000 cubic centimeters = 1 cubic decimeter (dm³).

1000 cubic decimeters = 1 cubic meter (m³).

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°F.

Measures of Weight

1 milligrams (mg) = 1 centigram (cg).

10 centigrams = 1 decigram (dg).

10 decigrams = 1 gram (g).

10 grams = 1 dekagram (dag).

10 dekagrams = 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	1 mile = 1.609 kilometers
39.37 inches	1 yard = 0.9144 meter
1 meter = 3.2808 feet	1 foot = 0.3048 meter
1.0936 yards	1 foot = 304.8 millimeters
1 centimeter = 0.3937 inch	1 inch = 2.54 centimeters
1 millimeter = 0.03937 inch	1 inch = 25.4 millimeters

Square Measure

1 square kilometer = 0.3861 square mile = 247.1 acres
1 hectare = 2.471 acres = 107,639 square feet
1 are = 0.0247 acre = 1076.4 square feet
1 square meter = 10.764 square feet = 1.196 square yards
1 square centimeter = 0.155 square inch
1 square millimeter = 0.00155 square inch
1 square mile = 2.5899 square kilometers
1 acre = 0.4047 hectare = 40.47 ares
1 square yard = 0.836 square meter
1 square foot = 0.0929 square meter = 929 square centimeters
1 square inch = 6.452 square centimeters = 645.2 square millimeters

Cubic Measure

1 cubic meter = 35.315 cubic feet = 1.308 cubic yards
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. quarts
1 cubic yard = 0.7646 cubic meter
1 cubic foot = 0.02832 cubic meter = 28.317 liters
1 cubic inch = 16.38706 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 (of 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)