Metric Conversion Chart

Metric prefixes, length, weight, volume and temperature, inside each system and between US and metric units.

BooknBoost

kilo (k) × 1,000	hecto (h) × 100	deka (da) × 10	base unit m, g, L × 1	deci (d) × 0.1	centi (c) × 0.01	milli (m) × 0.001

Each step is 10 times the next. To a smaller unit (right), multiply. To a bigger unit (left), divide.

In order: **K**ing **H**enry **D**ied **B**y **D**rinking **C**hocolate **M**ilk

Length

METRIC		
1 centimeter (cm)	=	**10** mm
1 meter (m)	=	**100** cm
1 meter (m)	=	**1,000** mm
1 kilometer (km)	=	**1,000** m
US CUSTOMARY		
1 foot (ft)	=	**12** in
1 yard (yd)	=	**3** ft
1 yard (yd)	=	**36** in
1 mile (mi)	=	**5,280** ft
1 mile (mi)	=	**1,760** yd
US AND METRIC		
1 inch (in)	=	**2.54** cm
1 cm	≈	**0.394** in
1 inch (in)	=	**25.4** mm
1 millimeter (mm)	≈	**0.039** in
1 foot	=	**0.3048** m
1 m	≈	**3.281** ft
1 yard	=	**0.9144** m
1 m	≈	**1.094** yd
1 mile	=	**1.609344** km
1 km	≈	**0.621** mi

Weight (mass)

METRIC		
1 gram (g)	=	**1,000** mg
1 kilogram (kg)	=	**1,000** g
1 metric ton (t)	=	**1,000** kg
US CUSTOMARY		
1 pound (lb)	=	**16** oz
1 ton	=	**2,000** lb
US AND METRIC		
1 ounce (oz)	≈	**28.35** g
1 g	≈	**0.035** oz
1 pound	≈	**0.454** kg
1 kg	≈	**2.205** lb
1 ton	=	**907.18474** kg
1 metric ton	≈	**1.102** tons

Volume (capacity)

METRIC		
1 liter (L)	=	**1,000** mL
1 milliliter (mL)	=	**1** cm^3
1 cubic meter (m^3)	=	**1,000** L
US CUSTOMARY		
1 tablespoon (tbsp)	=	**3** tsp
1 fluid ounce (fl oz)	=	**2** tbsp
1 cup	=	**8** fl oz
1 pint (pt)	=	**2** cups
1 quart (qt)	=	**2** pt
1 gallon (gal)	=	**4** qt
US AND METRIC		
1 teaspoon (tsp)	≈	**4.929** mL
1 mL	≈	**0.203** tsp
1 fl oz	≈	**29.574** mL
1 L	≈	**33.814** fl oz
1 cup	≈	**236.588** mL
1 L	≈	**4.227** cups
1 pint	≈	**0.473** L
1 L	≈	**2.113** pt
1 quart	≈	**0.946** L
1 L	≈	**1.057** qt
1 gallon	≈	**3.785** L
1 L	≈	**0.264** gal

TEMPERATURE

°F = °C × 9/5 + 32 (× 9/5 is the same as × 1.8)

°C = (°F − 32) × 5/9

K = °C + 273.15 (kelvin, used in science)

°C	−40	−20	−10	0	10	20	25	30	37	40	100
°F	−40	−4	14	32	50	68	77	86	98.6	104	212

−40 °C: the two scales meet · 0 °C: water freezes · 20 °C: room temperature · 37 °C: body temperature · 100 °C: water boils (at sea level)

THE EXACT DEFINITIONS

1 inch = 2.54 centimeters

1 pound = 0.45359237 kilogram

1 gallon = 231 cubic inches = 3.785411784 liters

Every US-to-metric number on this chart is worked out from these three (NIST Handbook 44). **=** marks an exact factor. **≈** marks one rounded to the nearest thousandth.