

# Unit Conversion Tables

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## Time

1 day = 24 hours = 1440 minutes = 86400 seconds

1 hour = 60 minutes = 3600 seconds

1 year = 31 557 600 seconds  $\approx \pi \times 10^7$  seconds

## Length

1 mile = 8 furlongs = 80 chains = 320 rods = 1760 yards = 5280 feet = 1.609344 km

1 yard = 3 feet = 36 inches = 0.9144 meter

1 foot = 12 inches = 0.3048 meter

1 inch = 2.54 cm

1 nautical mile = 1852 meters = 1.15077944802354 miles

1 fathom = 6 feet

1 parsec = 3.26156376188 light-years = 206264.806245 AU =  $3.08567756703 \times 10^{16}$  meters

1 ångström = 0.1 nm =  $10^5$  fermi =  $10^{-10}$  meter

## Mass

1 kilogram = 2.20462262184878 lb

1 pound = 16 oz = 0.45359237 kg

1 slug = 32.1740485564304 lb = 14.5939029372064 kg

1 short ton = 2000 lb

1 long ton = 2240 lb

1 metric ton = 1000 kg

## Velocity

15 mph = 22 fps

1 mph = 0.44704 m/s

1 knot = 1.15077944802354 mph = 0.5144444444444444 m/s

## Area

1 acre = 43560 ft<sup>2</sup> = 4840 yd<sup>2</sup> = 4046.8564224 m<sup>2</sup>

1 mile<sup>2</sup> = 640 acres = 2.589988110336 km<sup>2</sup>

1 hectare = 10<sup>4</sup> m<sup>2</sup> = 2.47105381467165 acres

## Volume

$$1 \text{ liter} = 1 \text{ dm}^3 \approx 1 \text{ quart}$$

$$1 \text{ m}^3 = 1000 \text{ liters}$$

$$1 \text{ cm}^3 = 1 \text{ mL}$$

$$1 \text{ ft}^3 = 1728 \text{ in}^3 = 7.48051948051948 \text{ gal} = 28.316846592 \text{ liters}$$

$$1 \text{ gallon} = 231 \text{ in}^3 = 4 \text{ quarts} = 8 \text{ pints} = 16 \text{ cups} = 3.785411784 \text{ liters}$$

$$1 \text{ cup} = 8 \text{ floz} = 16 \text{ tablespoons} = 48 \text{ teaspoons}$$

$$1 \text{ tablespoon} = 3 \text{ teaspoons} = 4 \text{ fluidrams}$$

$$1 \text{ dry gallon} = 268.8025 \text{ in}^3 = 4.40488377086 \text{ liters}$$

$$1 \text{ imperial gallon} = 4.54609 \text{ liters}$$

$$1 \text{ bushel} = 4 \text{ pecks} = 8 \text{ dry gallons}$$

## Density

$$1 \text{ g/cm}^3 = 1000 \text{ kg/m}^3 = 8.34540445201933 \text{ lb/gal} = 1.043175556502416 \text{ lb/pint}$$

## Force

$$1 \text{ lbf} = 4.44822161526050 \text{ newtons}$$

$$1 \text{ newton} = 10^5 \text{ dynes}$$

## Energy

$$1 \text{ calorie} = 4.1868 \text{ joules}$$

$$1 \text{ BTU} = 1055.05585262 \text{ joules}$$

$$1 \text{ ft-lb} = 1.35581794833140 \text{ joules}$$

$$1 \text{ kW-hr} = 3.6 \text{ MJ}$$

$$1 \text{ eV} = 1.602176487 \times 10^{-19} \text{ joules}$$

$$1 \text{ joule} = 10^7 \text{ ergs}$$

## Power

$$1 \text{ horsepower} = 745.69987158227022 \text{ watts}$$

## Angle

$$\text{rad} = \text{deg} \times \frac{\pi}{180} \quad \text{deg} = \text{rad} \times \frac{180}{\pi}$$

$$1 \text{ deg} = 60 \text{ arcmin} = 3600 \text{ arcsec}$$

## Temperature

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times \frac{5}{9} \quad ^{\circ}\text{F} = (^{\circ}\text{C} \times \frac{9}{5}) + 32$$

$$\text{K} = ^{\circ}\text{C} + 273.15$$

$$^{\circ}\text{R} = ^{\circ}\text{F} + 459.67$$

## Pressure

$$\begin{aligned} 1 \text{ atm} &= 101325 \text{ Pa} = 1013250 \text{ dyne/cm}^2 = 1013.25 \text{ millibar} = 760 \text{ torr} \\ &= 760 \text{ mmHg} = 29.9212598425197 \text{ inHg} = 14.6959487755134 \text{ psi} \\ &= 2116.21662367394 \text{ lb/ft}^2 = 1.05810831183697 \text{ ton/ft}^2 \end{aligned}$$