

Some Basic Conversions

Some Basic Examples

- 1 cup = 8 oz
- 1 grain = 60 or 65 mg
- 1 Gram = 15 grain
- 1 kg = 2.2 lbs
- 1 oz = 30 mL
- 1 tsp = 5 mL
- 1 Tbsp = 3 tsp
- 15 mL = 1 Tbsp
- 1 lb = 16 oz
- 1 gallon = 4 quarts



Temperature

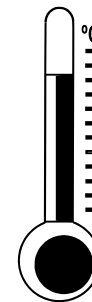
Celsius to Fahrenheit = Multiply by 9/5 and add 32

$$^{\circ}\text{C} \times 9/5 + 32 = ^{\circ}\text{F}$$

Fahrenheit to Celsius = Subtract 32 and multiply by 5/9

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

Kelvin - 273.15 = Celsius



Metric System

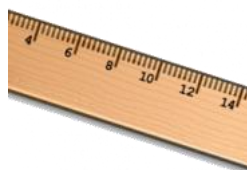
K__	H__	Da__	base	d__	c__	m__
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Measurement	Base unit
length	meter (m)
mass	gram (g)
volume	liter (l)
time	second (s)

Fraction	Prefix	Symbol	Multiple	Prefix	Symbol
10 ⁻¹	deci	d	10	deka	da
10 ⁻²	centi	c	10 ²	hecto	h
10 ⁻³	milli	m	10 ³	kilo	k
10 ⁻⁶	micro	μ	10 ⁶	mega	M
10 ⁻⁹	nano	n	10 ⁹	giga	G
10 ⁻¹²	pico	p	10 ¹²	tera	T
10 ⁻¹⁵	femto	f	10 ¹⁵	peta	P
10 ⁻¹⁸	atto	a	10 ¹⁸	exa	E
10 ⁻²¹	zepto	z	10 ²¹	zetta	Z
10 ⁻²⁴	yocto	y	10 ²⁴	yotta	Y

Length

- 12 in = 1 foot
- 3 feet = 1 yard
- 5280 feet = 1 mile
- 2.54 cm = 1 inch



Time

- 60 seconds = 1 minute
- 60 minutes = 1 hour
- 24 hours = 1 day
- 12 months = 1 year
- 365 days = 1 year



Energy

- 1 Joule = .000239 KCal
- 1 Joule = .00028 Watt Hours
- 1 Joule = 6.242 E + 18 Electronvolts
- 1 HP = 745.7 Watts
- 1 cal = 4.18 Joule

Pressure

- 1 Pa = 1 newton/m²
- 1 atm = 760 torr

Speed

- 1 knot = 1.15 miles per hour
- 1 m/sec = 3.6 km/hr

Other Units

- 1 Angstrom (Å) = 1 x 10⁻⁷ millimeter
- 1 mol = 6.02 x 10²³ particles

Category	From	To	Conversion Factor
Length	Inches (in)	Centimeters (cm)	1 in = 2.54 cm
	Feet (ft)	Meters (m)	1 ft = 0.3048 m
	Yards (yd)	Meters (m)	1 yd = 0.9144 m
	Miles (mi)	Kilometers (km)	1 mi = 1.609 km
Mass/Weight	Ounces (oz)	Grams (g)	1 oz = 28.3495 g
	Pounds (lb)	Kilograms (kg)	1 lb = 0.4536 kg
	Tons (US)	Metric Tons (t)	1 ton = 0.9072 t
Volume	Fluid Ounces (fl oz)	Milliliters (mL)	1 fl oz = 29.5735 mL
	Cups (US)	Milliliters (mL)	1 cup = 236.588 mL
	Pints (pt)	Liters (L)	1 pt = 0.4732 L
	Quarts (qt)	Liters (L)	1 qt = 0.9464 L
	Gallons (gal)	Liters (L)	1 gal = 3.7854 L
Temperature	Fahrenheit (°F)	Celsius (°C)	$(^{\circ}\text{F} - 32) \times 5/9 = ^{\circ}\text{C}$
	Celsius (°C)	Fahrenheit (°F)	$(^{\circ}\text{C} \times 9/5) + 32 = ^{\circ}\text{F}$
Speed	Miles per hour (mph)	Kilometers per hour (km/h)	1 mph = 1.609 km/h
	Meters per second (m/s)	Kilometers per hour (km/h)	1 m/s = 3.6 km/h
Energy	Joules (J)	Calories (cal)	1 J = 0.239 cal
	Kilojoules (kJ)	Calories (cal)	1 kJ = 239 cal
Pressure	Pascals (Pa)	Atmospheres (atm)	101325 Pa = 1 atm
	PSI (pounds per square inch)	Pascals (Pa)	1 PSI = 6894.76 Pa
Power	Watts (W)	Horsepower (hp)	1 W = 0.00134 hp