

Basic Conversion Cheat Sheet

- Three basic units of measurement → length, mass (weight), volume
 - The basic unit of length is: METER
 - The basic unit of volume is: LITER
 - The basic unit of mass (weight) is: GRAM
- The following are some of the prefixes for the metric system. They are based on powers of ten and can all be applied to length, mass, or volume. Smaller units are on the left, larger units are on the right.
 - When converting, assign the unit to the right a value of 1 and add a zero each unit you move to the left. Example: 1 dekameter = 1000 centimeters or 1 kilometer = 10 hectometers.
 - For the prefixes outside milli and kilo, add 3 zeros for every unit. Realize there are other prefixes that fall into these gaps, but the ones listed are the more commonly used in science.

Metric to Metric Conversions

Pico	Nano	Micro	Milli	Centi	Deci	BASE	Deka	Hecto	Kilo	Mega	Giga	Tera
p 10 ⁻¹²	n 10 ⁻⁹	μ 10 ⁻⁶	m 10 ⁻³	c 10 ⁻²	d 10 ⁻¹	meter (m) liter (L) gram (g) second (s)	da 10 ¹	h 10 ²	k 10 ³	M 10 ⁶	G 10 ⁹	T 10 ¹²

Metric to English or English to Metric Conversions

- 1 inch (in) = 2.54 centimeters (cm)
- 1 pound (lb) = 454 grams (g)
- 1 quart (qt) = 946 milliliters (mL)
- 1 metric ton = 1000 kg
- 1 milliliter (mL) = 1 cubic centimeter (cc or cm³)
- **Water only:** 1 milliliter (mL) = 1 cubic centimeter (cc or cm³) = 1 gram (g)

English to English Conversions

- 1 feet (ft) = 12 inches (in)
- 1 pound (lb) = 16 ounces (oz)
- 1 yard (yd) = 36 inches (in)
- 1 mile = 5280 feet (ft)
- 1 gallon (gal) = 4 quarts (qt)
- 1 quart (qt) = 2 pints (pt)
- 8 fluid ounces (fl oz) = 1 cup
- 16 fluid ounces (fl oz) = 1 pint (pt)
- 32 fluid ounces (fl oz) = 1 quart (qt)
- 1 ton = 2000 pounds (lb)

- 1 minute (min) = 60 seconds (s)
- 1 hour (h) = 60 minutes (min)