

CONVERSIONS AND CONSTANTS

Length units	inch (in) = 2.54 cm (exact) mile (mi) = 1.609 km
Volume units	L = 1.057 qt
Mass units	lb = 453.6 g $u = 1.6605 \times 10^{-24}$ g
Avogadro's number	6.022×10^{23}
Pressure units	atm = 760 Torr (exact) bar = 100 kPa (exact) atm = 760 Torr = 1.01325 bar = 101.325 kPa (all exact) atm = 14.7 psi
Gas constant	$R = 0.08206 \frac{\text{L} \cdot \text{atm}}{\text{mol} \cdot \text{K}} = 8.314 \frac{\text{J}}{\text{mol} \cdot \text{K}}$
Energy units	$\text{J} = \frac{\text{kg} \cdot \text{m}^2}{\text{s}^2} = \text{V} \cdot \text{C}$ cal = 4.184 J (exact) Cal (nutritional) = 4.184 kJ (exact)
Speed of light (in a vacuum)	$c = 3.00 \times 10^8$ m/s
Planck's constant	$h = 6.626 \times 10^{-34}$ J·s
Coulomb	$C = 6.242 \times 10^{18}$ charges
Faraday constant	96,485 C/mol
Mass-energy	$u = 931.5$ MeV