

Common Chemistry Conversions

English to Metric Conversions

(all conversions are accurate to 4 significant figures)

Mass	Length	Volume	Area	Temperature
1 lb = 453.6 g	1 in = 2.54 cm	1 fl oz = 29.57 mL	$1 \text{ in}^2 = (2.54 \text{ cm})^2 = 6.452 \text{ cm}^2$	$T_{\text{oC}} = 5/9(T_{\text{oF}} - 32)$
1 oz = 28.35 g	1 ft = 30.48 cm	1 L = 1.057 qt	$1 \text{ m}^2 = (3.281 \text{ ft})^2 = 10.76 \text{ ft}^2$	$T_{\text{oF}} = 9/5T_{\text{oC}} + 32$
1 kg = 2.205 lbs	1 m = 3.281 ft	1 gal = 3.785 L		$T_{\text{K}} = T_{\text{oC}} + 273.15$
1 metric ton = 1000. kg	1 mi = 1.609 km	$1 \text{ in}^3 = (2.54 \text{ cm})^3 = 16.39 \text{ cm}^3$		

English to English Conversions. (all conversions are exact)

Mass	Length	Volume	Area
1 lb = 16 oz	1 ft = 12 in	1 cup = 8 oz	$1 \text{ ft}^2 = (12 \text{ in})^2 = 144 \text{ in}^2$
1 ton = 2000 lbs	1 yd = 3 ft	1 pt = 2 cups	$1 \text{ mi}^2 = 640 \text{ acres}$
	1 mi = 5280 ft	1 qt = 2 pt	
		1 gal = 4 qt	

Other Conversions

(all conversions good to 4 significant figures)

Energy	Pressure
1 cal = 4.184 J	1 atm = 760 mmHg
	1 atm = 760 torr
	1 atm = 101,325 Pa (pascal)

Constants

m_e	$1.6726 \times 10^{-27} \text{ kg}$
Avogadro's number	$n = 6.0221367 \times 10^{23} \text{ particles per mole}$
Gas Constant	$R = 0.0821 \text{ L atm/ mol K}$