Table 1

International System (SI) Standard Unit			
Measurement	**Standard SI Unit**	**Common Lab Unit**	**Equivalency to SI Standard**
mass	kilogram (kg)	gram (g)	1 g = 0.001 kg
length	meter (m)	centimeter (cm)	1 cm = 0.01 m
		millimeter (mm)	1 mm = 0.001 m
volume	cubic meter (m^3)	cubic decimeter (dm^3)	1 dm^3 = 0.001 m^3
		cubic centimeter (cm^3)	1 cm^3 = 0.001 dm^3
		milliliter (mL)	1 mL = 1cm^3
		liter (L)	1 L = 1000 mL = 1dm^3
time	second (s)		
temperature	kelvin (K)	degree Celsius (°C)	K = °C + 273

Table 2

SI Unit Prefixes			
Prefix	**Symbol**	**Multiplication Factor**	**Scientific Notation**
mega-	M	1 000 000	10^6
kilo-	k	1 000	10^3
hecto-	h	100	10^2
deka- → (gram, meter, liter)	da → (g, m, ℓ)	10 → 1	10^1 → 10^0
deci-	d	0.1	10^{-1}
centi-	c	0.01	10^{-2}
milli-	m	0.001	10^{-3}
micro-	μ	0.000 001	10^{-6}
nano-	n	0.000 000 001	10^{-9}

TEMPERATURE CONVERSION FORMULAS

- $T_K = T_C + 273$
- $T_F = T_C(1.8) + 32$

Length

SI Unit: Meter (m)

1 meter = 1.0936 yards
1 centimeter = 0.39370 inch
1 inch = 2.54 centimeters (exactly)
1 kilometer = 0.62137 mile
1 mile = 5280. feet = 1.6093 kilometers

Volume

SI Unit: Cubic Meter (m^3)

1 liter = 10^{-3} m^3 = 1 dm^3 = 1.0567 quarts
1 gallon = 4 quarts = 8 pints = 3.7854 liters
1 quart = 32 fluid ounces = 0.94635 liter

Mass

SI Unit: Kilogram (kg)

1 kilogram = 1000 grams = 2.2046 pounds
1 pound = 453.59 grams = 0.45359 kilogram = 16 ounces
1 atomic mass unit = 1.66057×10^{-27} kilograms

Pressure

SI Unit: Pascal (Pa)

1 atmosphere = 101.325 kilopascals = 760.torr (mm Hg) = 14.70 pounds per square inch

Energy

SI Unit: Joule (J)

1 joule = 0.23901 calorie
1 calorie = 4.184 joules