

Metric System

Def:

- Also known as SI system
- Decimal base
- Based on multiples of ten

Mass

- measured in grams (g)
- different than weight (gravity)
 $1\text{ g} \ll 1\text{ lb}$

Volume

- measured in liters (L)
 $1\text{ L} \ll 1\text{ gal}$

Length

- measured in meters (m)
 $1\text{ m} > 1\text{ yd}$

Prefixes

can be used with mass, vol. + length

m

milli

$$\frac{1}{1000} = .001$$

c

centi

$$\frac{1}{100} = .01$$

d

deci

$$\frac{1}{10} = .1$$

K

Kilo

$$1000$$

Memorize

$$1 \text{ m} = 10 \text{ dm} = 100 \text{ cm} = 1000 \text{ mm} = .001 \text{ km}$$

$$1 \text{ g} = 10 \text{ dg} = 100 \text{ cg} = 1000 \text{ mg} = .001 \text{ kg}$$

$$1 \text{ L} = 10 \text{ dL} = 100 \text{ cL} = 1000 \text{ mL} = .001 \text{ KL}$$

$$1 \text{ cm}^3 = 1 \text{ mL}$$

Conversion
Factors

- Two quantities that are equal but have different units

- They have an infinite # of sig figs because they are exact

ex:

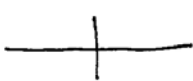
$$12 \text{ eggs} = 1 \text{ dozen eggs}$$

$$100 \text{ cm} = 1 \text{ m}$$

Dimensional
Analysis

A way to convert from one set of units to another

Requires
(2)

1) 

2) conversion
factor