

# METRIC SYSTEM

SYMBOL		PREFIX	MATHEMATICAL MEANING
T	<i>Pneumonic</i>	Tera-	1,000,000,000,000 = $10^{12}$
G	<i>Great</i>	Giga-	1,000,000,000 = $10^9$
M	<i>Merry</i>	Mega-	1,000,000 = $10^6$
k	<i>knights</i>	kilo-	1000 = $10^3$
h	<i>hate</i>	hecto-	100 = $10^2$
da	<i>dancing</i>	deca-	10 = $10^1$
			POSITIVE Exponents ↑
			1 = $10^0$
			NEGATIVE Exponents ↓
d	<i>did</i>	deci-	0.1 = $10^{-1}$
c	<i>clinton</i>	centi-	0.01 = $10^{-2}$
m	<i>make</i>	milli-	0.001 = $10^{-3}$
μ	<i>μany</i>	micro-	0.000 001 = $10^{-6}$
n	<i>nasty</i>	nano-	0.000 000 001 = $10^{-9}$
p	<i>proposals</i>	pico-	0.000 000 000 001 = $10^{-12}$
f	<i>frequently</i>	fempto-	0.000 000 000 000 001 = $10^{-15}$

METRIC BASE UNITS		
g	grams	Mass
m	meter	Length
ℓ	liters	Volume

# METRIC ↔ ENGLISH SYSTEMS

## METRIC (M) ↔ ENGLISH (E)

### CONVERSION BRIDGES

#### LENGTH

$$\left[ \begin{array}{c} 2.54 \text{ cm} = 1 \text{ in} \\ \text{M} \longleftrightarrow \text{E} \end{array} \right]$$

#### MASS

$$\left[ \begin{array}{c} 453.6 \text{ g} = 1 \text{ lb} \\ \text{M} \longleftrightarrow \text{E} \end{array} \right]$$

#### VOLUME

$$\left[ \begin{array}{c} .9463 \text{ L} = 1 \text{ qt} \\ \text{M} \longleftrightarrow \text{E} \end{array} \right]$$

## ENGLISH SYSTEM

#### LENGTH

12 in = 1 ft  
3 ft = 1 yd  
36 in = 1 yd  
5280 ft = 1 mi

#### MASS

16 oz = 1 lb  
2000 lb = 1 ton

#### VOLUME

32 oz = 1 qt  
4 cups = 1 qt  
2 pts = 1 qt  
4 qts = 1 gal  
16 oz = 1 pt  
8 oz = 1 cup

1 mL = 1 cm<sup>3</sup>  
1 L = 1 dm<sup>3</sup>