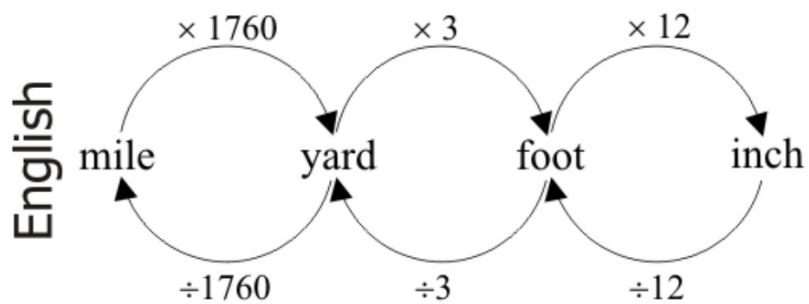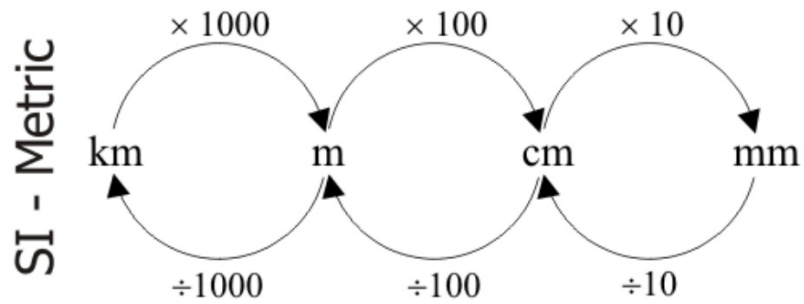# Unit 0 Lesson II
Units of Measurment

Objective: The student will be able to use the factor-label method and dimensional analysis to interconvert between different units.

Units of Measurement
The Metric System

Multiply to change larger units to smaller units.

SI - Metric

	× 1000	× 100	× 10
km	→ m	→ cm	→ mm
	÷1000	÷100	÷10

English

	× 1760	× 3	× 12
mile	→ yard	→ foot	→ inch
	÷1760	÷3	÷12

Divide to change smaller units to larger units.

Measurements and their Units

Mass	kilogram (kg)
Time	second (s or sec)
Length	meter (m)
Quantity (Amount of substance)	mole (mol)
Luminous Intensity	candela (cd)
Electric current	ampere (A or amp)
Temperature	Kelvin (K)

The Metric Scale

multiply →

T	G	M	K	m	μ	n	p
TERA	GIGA	MEGA	KILO	MILLI	MICRO	NANO	PICO
10^{12}	10^{9}	10^{6}	10^{3}	10^{-3}	10^{-6}	10^{-9}	10^{-12}

0

10^{2}	10^{1}	10^{-1}	10^{-2}
HECTO	DECA	DECI	CENTI
h	da	d	c

← divide
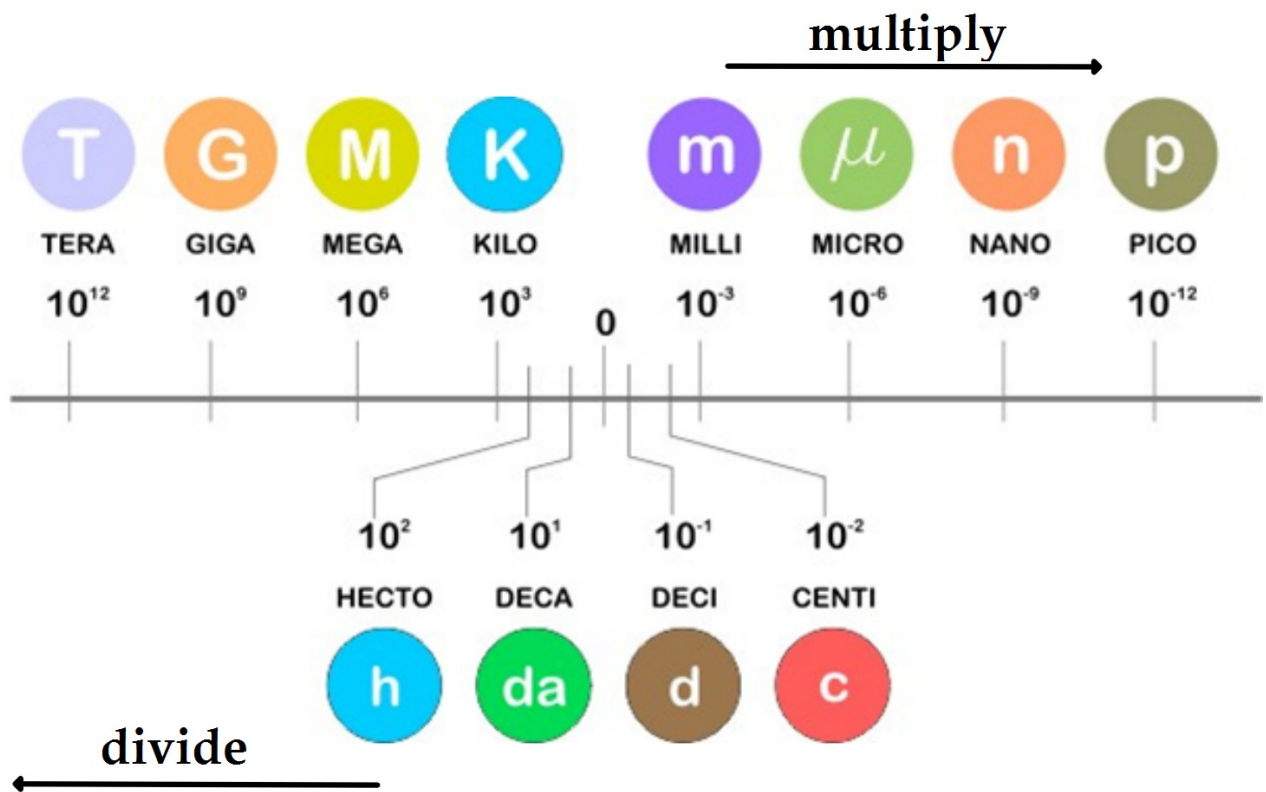
change deca to "deka" and da to "dk"

Mnemonic Device
How to Remember the Metric System Prefixes

discuss which portions of the metric scale we will use

Metric Unit Practice

a) 1000 mg = _____ g

b) 1 L = _____ mL

c) 160 cm = _____ mm

d) 14 km = _____ m

e) 109 g = _____ dg

f) 250 hm = _____ cm