

## Metric System notes

I. Metric – known as the SI system, which is the international system of measurements

A. Why use the metric system?

- The metric system is used worldwide. In most countries, the metric system is the ONLY system they use.
- The metric system is a decimal system and is based on powers of ten, so calculations and conversions are easy.

B. Measurements and base units used in the SI system

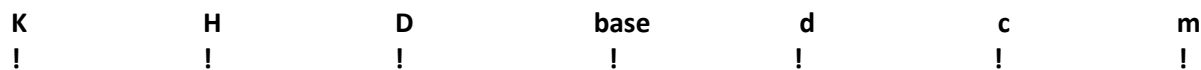
Measurement type	Base unit	Symbol
Length	meter	m
Volume	liter	L
Mass	gram	g
time	seconds	s
temperature	degrees Celsius	°C
Force	Newton	N
Energy	Joule	J

C. Prefixes preceding any base unit tell you the value of that measurement. Decimals are used when trying to make more precise measurements.

Prefix	abbreviations	Multiply by
kilo-	K	1000
hecto-	H	100
deka-	D	10
“base unit”	m, L, g, s, °C, N, J	1
deci	d	.1
Centi	c	.01
milli	m	.001

- The prefixes are consistent for any measurement. For example, a kilogram (Kg) is 1000 grams and a kiloliter (KL) is 1000 liters and a kilometer is 1000 meters.

D. In order to make metric conversions, use the following conversion chart, and follow 3 easy steps.



- 1) Start with the unit you are trying to convert (the one with a #)
- 2) Count the spaces to the unit you are converting to (the one without a #)
- 3) Move the decimal over that many places

For example: 12 dL = \_\_\_\_\_ DL

- 1) Start at deciliter (d) and move to the left toward dekaliter (D)
- 2)  $d \rightarrow D = 2$  places to the left
- 3) 12. Deciliters = .12 Dekaliters