

Metric Measurement Review Notes

Accuracy-how close a measurement is to accepted/true value

Precision-how exact a measurement is

Prefix	Abbreviation (lower case)	Numeric Value	How to Remember
kilo	k	$1000=10^3$	king
hecto	h	$100=10^2$	hecto
deca	da	$10=10^1$	died
key/base meter, liters, gram	m, L, g	$1=10^0$	kindly/badly
deci	d	$.1=1/10=10^{-1}$	drinking
centi	c	$.01=1/100=10^{-2}$	chocolate
milli	m	$.001=1/1000=10^{-3}$	milk

Hints:

- Use lower case letters
- Each unit is bundled into groups of ten. Ex. 10mm=1 cm
- To convert-count # of jumps between units and multiply by 10.
- Converting to smaller unit-move decimal to right (multiply) [Love can be down right awful].
- Converting to larger unit-move decimal to left (divide) [Love can be up lefting].

Length-measuring linear distance

Key unit-meter

Hints

- be sure to start at zero on ruler
- measure to smallest unit: mm

Volume-amount of space or capacity

Key unit: L

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

Measuring Liquid Volume

- use graduated cylinder
- use flat surface
- read at eye level
- read at meniscus

Measuring Regular Solids

- use math formulas: $V=LxWxH$, $V=r^2x3.14xH$
- Unit: cm^3

Measuring Irregular Solids

Use displacement

- Put water in GC (enough to submerge object). Record.
- Submerge object and record volume water rises.
- Subtract 2 volumes.

Mass-amount of matter/molecules in a substance.

- Use balance
- Key unit: grams
- SI Unit: kg
- Not same as weight. Weight is mass x gravity.

Density-amount of matter packed into 1 cm^3 space.

- Formula: $D=M/V$
- Units: g/mL, g/cc, g/ cm^3
- Physical property for pure substance (identify)
- Water has density of 1 g/mL (mass=volume)
- Density less than 1 g/mL, object floats
- Density more than 1 g/mL, object sinks
- Can use slope to calculate