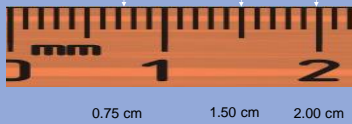


Measuring Length

Ruler – nearest mm or 0.05 cm

Measuring Mass

Amount of material in an object

Balance

To the nearest 0.01 g (for ours)

Measuring Temperature

Thermometer, in °C, to nearest degree

A measure of the average kinetic energy of particles in a material

Sensed as “hotness” or “coldness”

Determines the direction of heat flow

- always from high temperature to low temperature

| | Celsius, °C | Kelvin, K |
|---------------|-------------|-----------|
| m.p. water | 0°C | 273K |
| b.p. water | 100°C | 373K |
| absolute zero | -273°C | 0K |

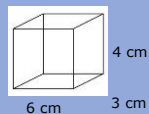
Measuring Volume

Amount of space occupied

Regular Solid

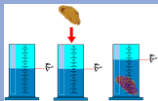
$$V = l \times w \times h$$

$$V = 6 \text{ cm} \times 4 \text{ cm} \times 3 \text{ cm} = 72 \text{ cm}^3$$

Irregular Solids

Graduated cylinder – water displacement

| | | |
|---------|---------|-----------|
| 10.0 mL | 16.5 mL | 16.5 mL |
| | | - 10.0 mL |
| | | 6.5 mL |

Liquids

Graduated Cylinder

10 mL to the nearest 0.1 mL

100 mL to the nearest 0.5 mL (end in .0 or .5)

Proper eye position

