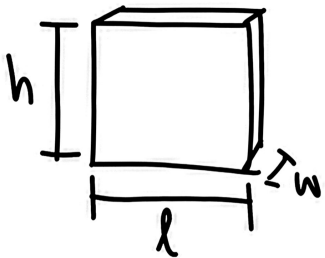
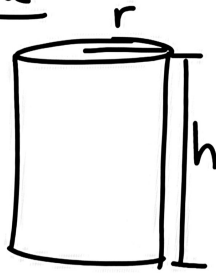


Volume : Space that matter occupies

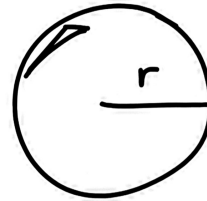
Calculated Volume



$$\text{Volume} = l \cdot w \cdot h$$



$$\text{Volume} = \pi \cdot r^2 \cdot h$$

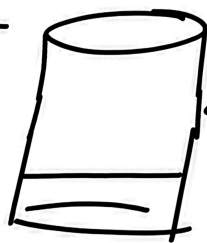
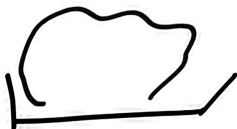


$$\text{Volume} = \frac{4}{3} \pi \cdot r^3$$

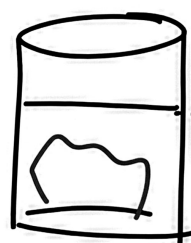
Volume : Space that matter occupies

Volume by Difference $V_{\text{diff}} = V_{\text{fin}} - V_{\text{ini}}$

Irregular Object

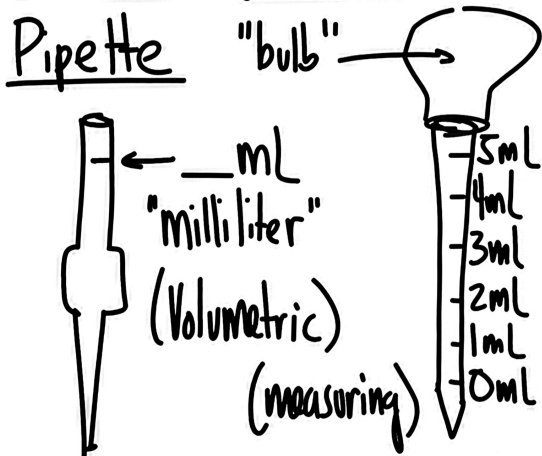


Starting
 V_{ini}
Volume

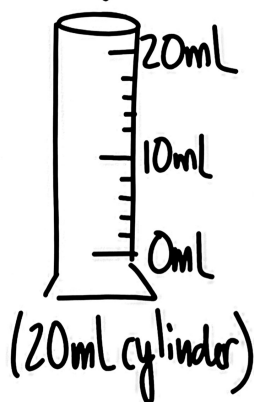


Final
 V_{fin}
Volume

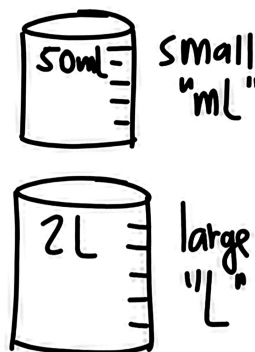
Measuring Volume



graduated
cylinder



beakers



Converting w/ volume

$$1 \text{ L}_A = 1000 \text{ mL}_A$$

$$\text{L}_A \rightarrow \text{mL}_A$$

start L_A	1000 mL_A
	1 L_A

$$\text{mL}_A \rightarrow \text{L}_A$$

start L_A	1 L_A
	1000 mL_A

Conversion examples

1. $419.39 \text{ mL H}_2(\text{g})$

to $1 \text{ L H}_2(\text{g})$

$$\frac{419.39 \text{ mL H}_2}{1000 \text{ mL H}_2} = 0.41939 \text{ L H}_2$$

419.39
move dec.
3 pl. left
= 0.41939 L H₂

(1 L_A = 1000 mL_A)

2. $4.28 \text{ L CO}_2(\text{g})$

to mL CO₂

$$\frac{4.28 \text{ L CO}_2}{1 \text{ L CO}_2} = 4280 \text{ mL CO}_2$$

4.28
move dec.
3 pl. right
= 4280 mL CO₂

...