

Distance: The space between 2 points.

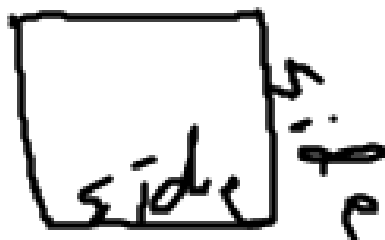
Mass: The amount of matter in an object.

Area: The conceptual space something takes up in 2 dimensions.

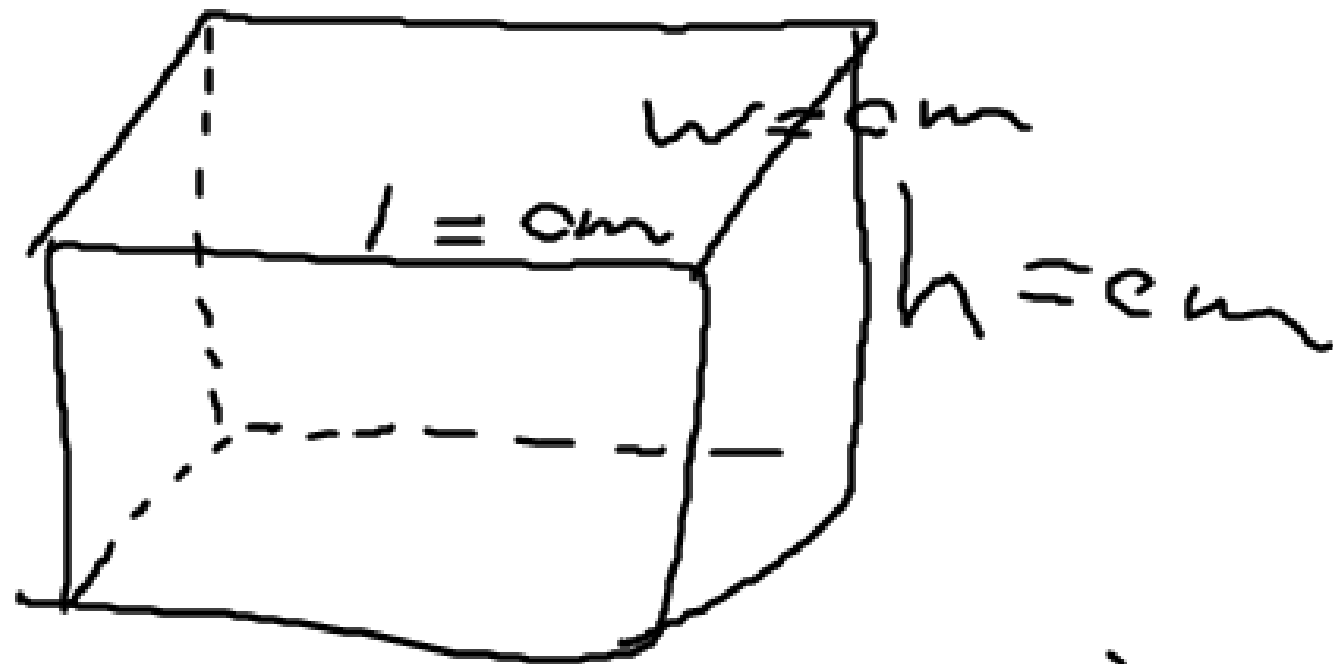
Mathematical

$$l \times w = \text{area}$$

$$\text{cm} \times \text{cm} = (\text{cm}^2)$$

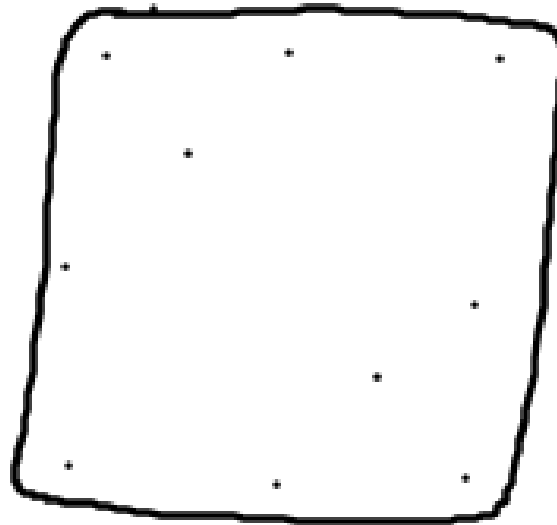
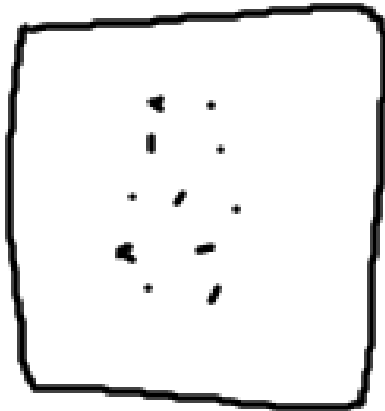


④ Conceptual Def. of Volume.  
The space something  
takes up in 3  
dimensions



$$\text{Volume} = l \times w \times h$$
$$\text{cm} \times \text{cm} \times \text{cm} = \text{cm}^3$$

## ⑤ Density:



Higher  
Density

How closely arranged  
atoms or molecules are

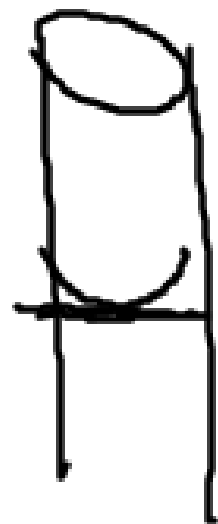
$$D = \frac{\text{mass}}{\text{Volume}} = \left( \frac{g}{mL} \right)$$

$$\text{mass} = \underline{8.2 \text{ g}} \quad \left( \text{water} \quad \frac{1.0 \text{ g}}{\text{ml}} \right)$$

Displacement:

Volume after 92.0

Volume before: 91.5 ml



Density: 0.5

$$\frac{m}{V} = \frac{8.2 \text{ g}}{0.5 \text{ ml}} = \frac{16.4 \text{ g}}{\text{ml}}$$