

$$\text{Pressure} = \frac{\text{Force}}{\text{Area}} = \frac{\text{N}}{\text{m}^2} = \text{Pa}$$

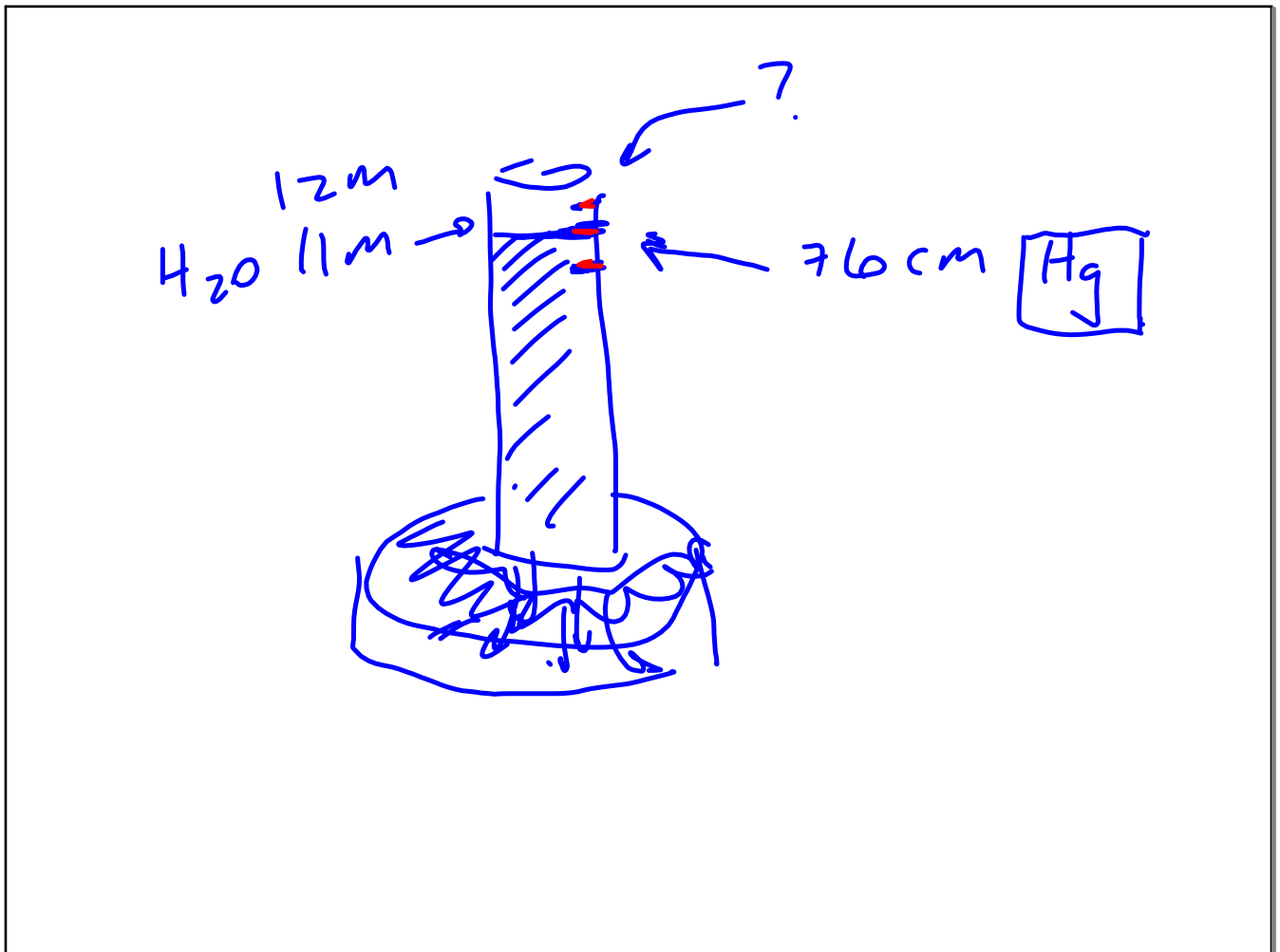
fluid = Anything that flows!

1 m<sup>3</sup> of air = 1 kg of mass!

Barometer - instrument measures  
air pressure!

H<sub>2</sub>O can be held up to 10m

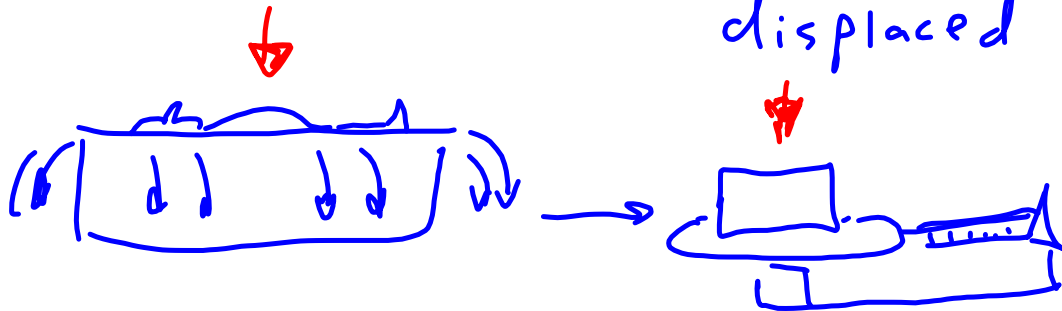
Hg → 76 cm



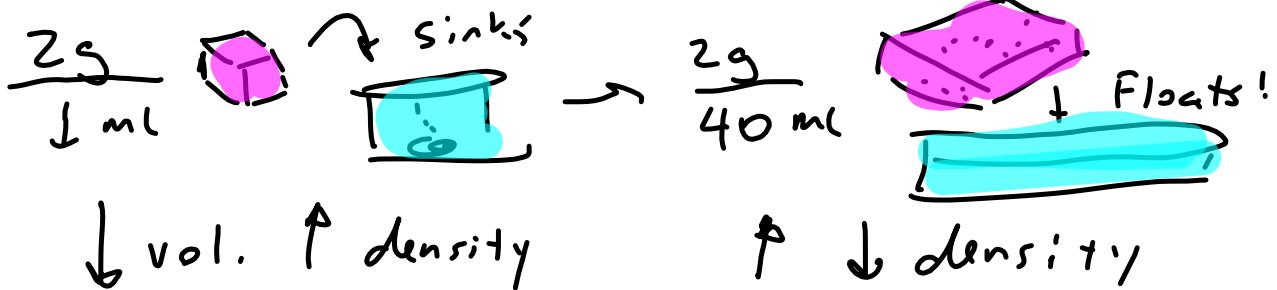
Buoyancy -  $\uparrow$  force against gravity

Archimedes' principle -

buoyant force = wt. of fluid displaced



$$\text{Density} = \frac{\text{Mass}}{\text{Volume}} = \frac{\text{g}}{\text{ml}} = \frac{\text{kg}}{\text{L}}$$



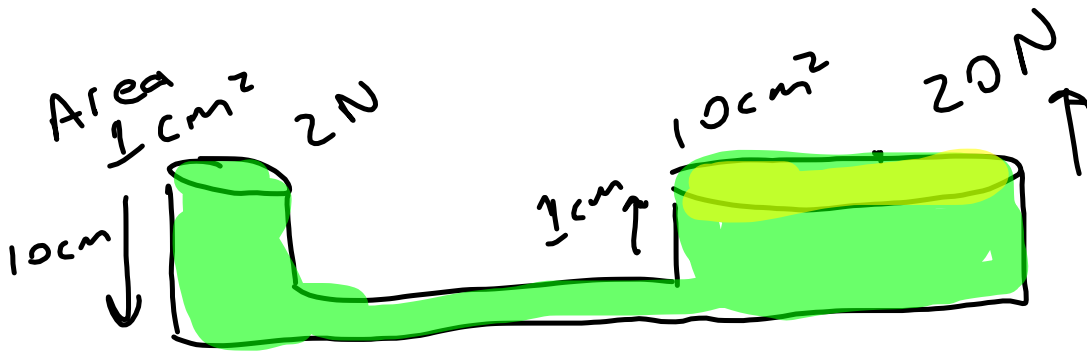
$$\text{H}_2\text{O} = 1 \text{ g/ml}$$

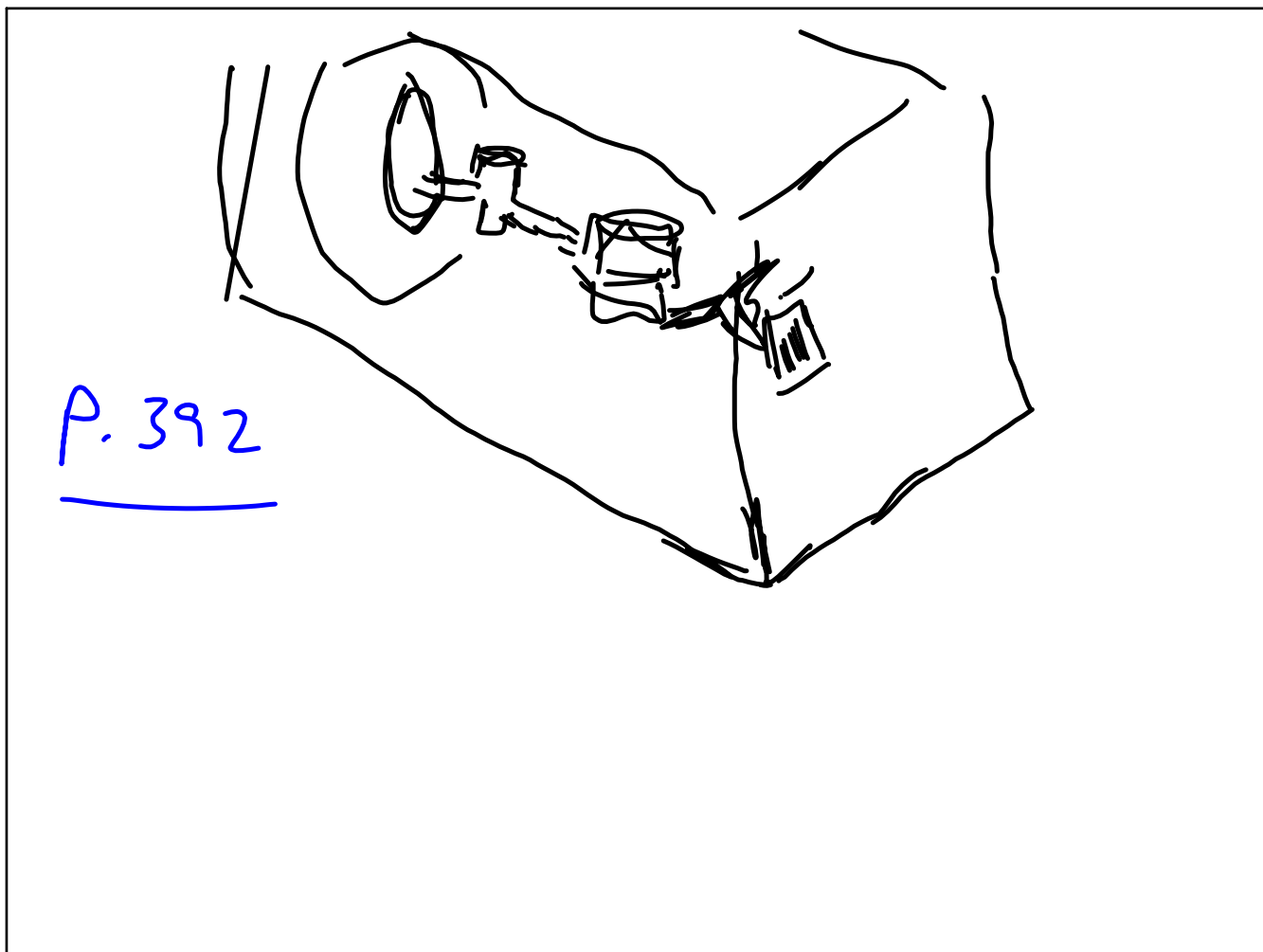
on  $\text{H}_2\text{O}$

\* if something floats  $\uparrow$  density  $\downarrow$  1%

\* if sinks  $\uparrow$  1 g/ml

Pascal's Principle -  
Confined fluid,  $\Delta$  pressure = all parts





Bernoulli's Principle -  
Faster flow  $\Rightarrow$  Less Pressure

Lift

