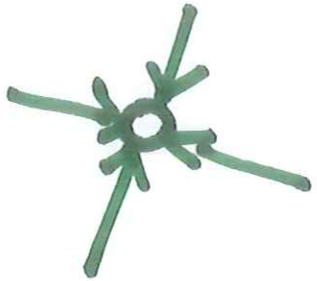
Physics I

2017-11-02

Agenda:
- Questions.
- Pressure gradients.
- Exam 4.

Pressure is a local, intensive, isotropic thing.



$$PV = nRT$$

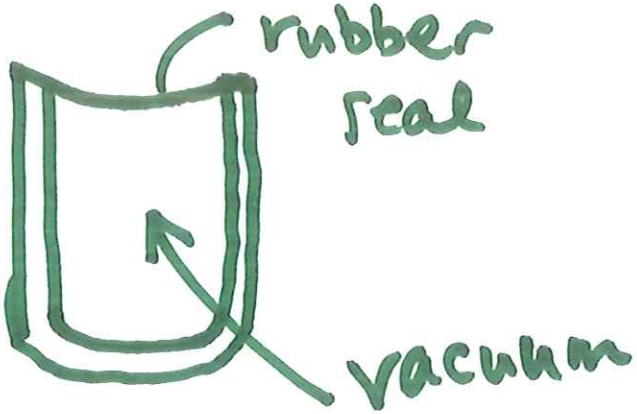
$$PV = NkT$$

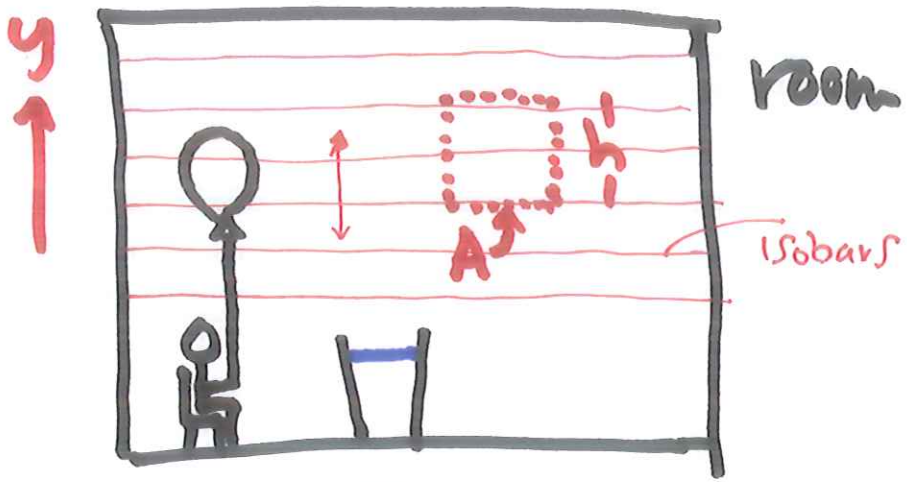
int. ext ext int

local global

~~$\delta W = P\,dV$~~

~~$T\,dS$~~





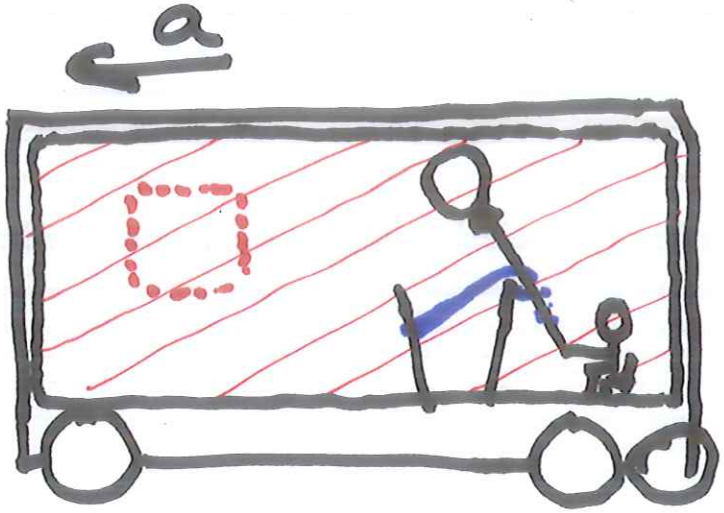
vertical forces only

th eq:

$$N_b - N_t - mg = 0$$

$$P_b A - P_t A = \rho A h g$$

$$\frac{P_b - P_t}{h} = \rho g = -\frac{dP}{dy}$$



"balloon in accelerating subway / car / van"