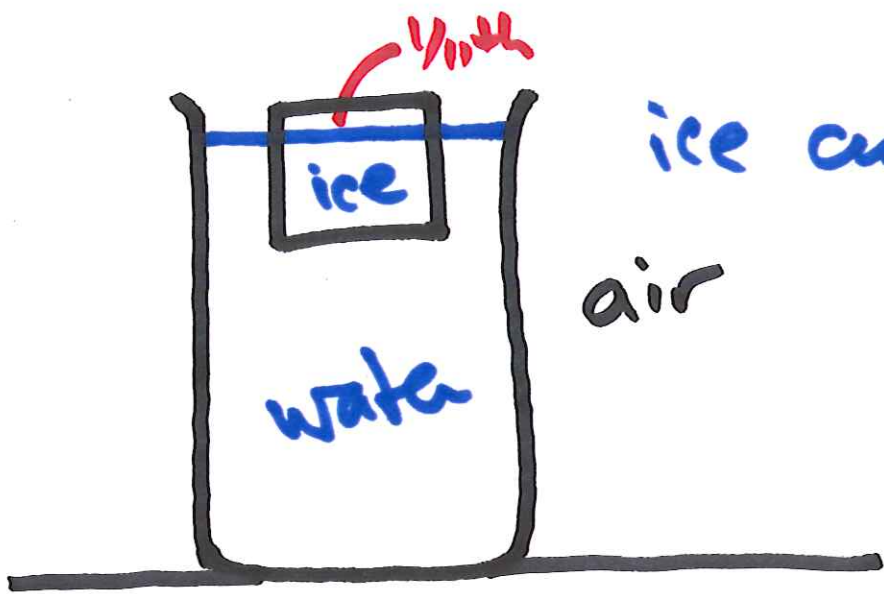


NYU Physics I

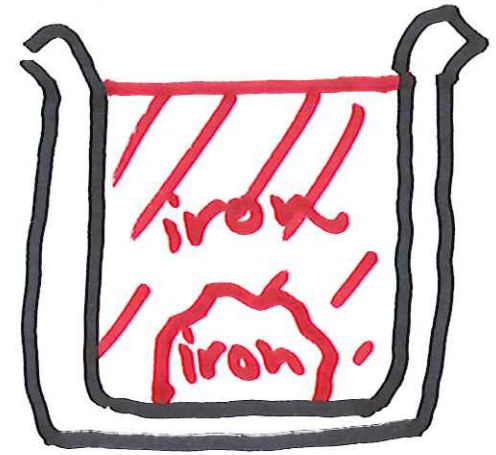
- Exam 3. ^{room} 1005
- (vanity)
- Qs.
- ice cube.
- ~~resonance~~

2018-10-30.

- buoyancy
- Pressure.
- Pressure gradient.

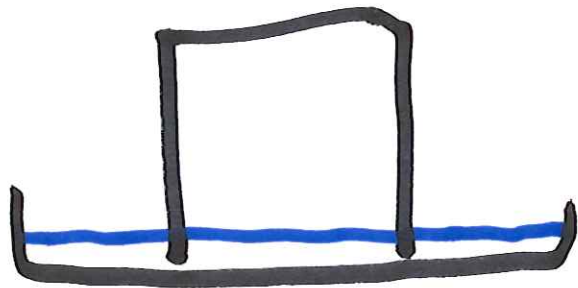


ice cube in water.



SI units: pressure: Pa $1 \text{ Pa} = \frac{1 \text{ N}}{\text{m}^2}$

$$1 \text{ atm} = 10^5 \text{ Pa} = \frac{10^5 \text{ N}}{\text{m}^2}$$





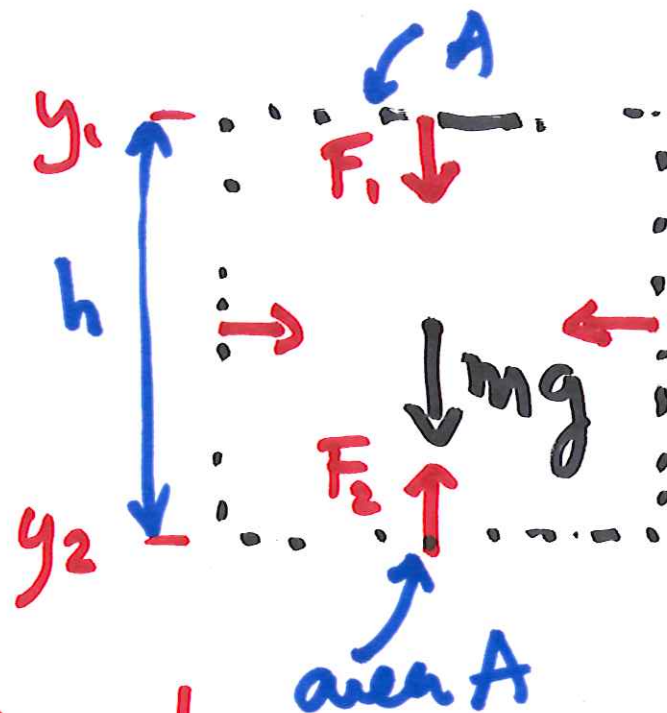
See also:

Concrete

Canoe

Competition.

Block o' air



1 m^3 of
air,
 m air.

$$|F_2| - |F_1| = |mg|$$

divide by A .

mass of the block of air!

$$P_2 - P_1 = \frac{mg}{A} = \frac{g}{A} \rho_{\text{air}} A \cdot h$$

$$\frac{P_2 - P_1}{h} = g \rho_{\text{air}} \quad \text{or} \quad P_2 = P_1 + \rho g h$$

