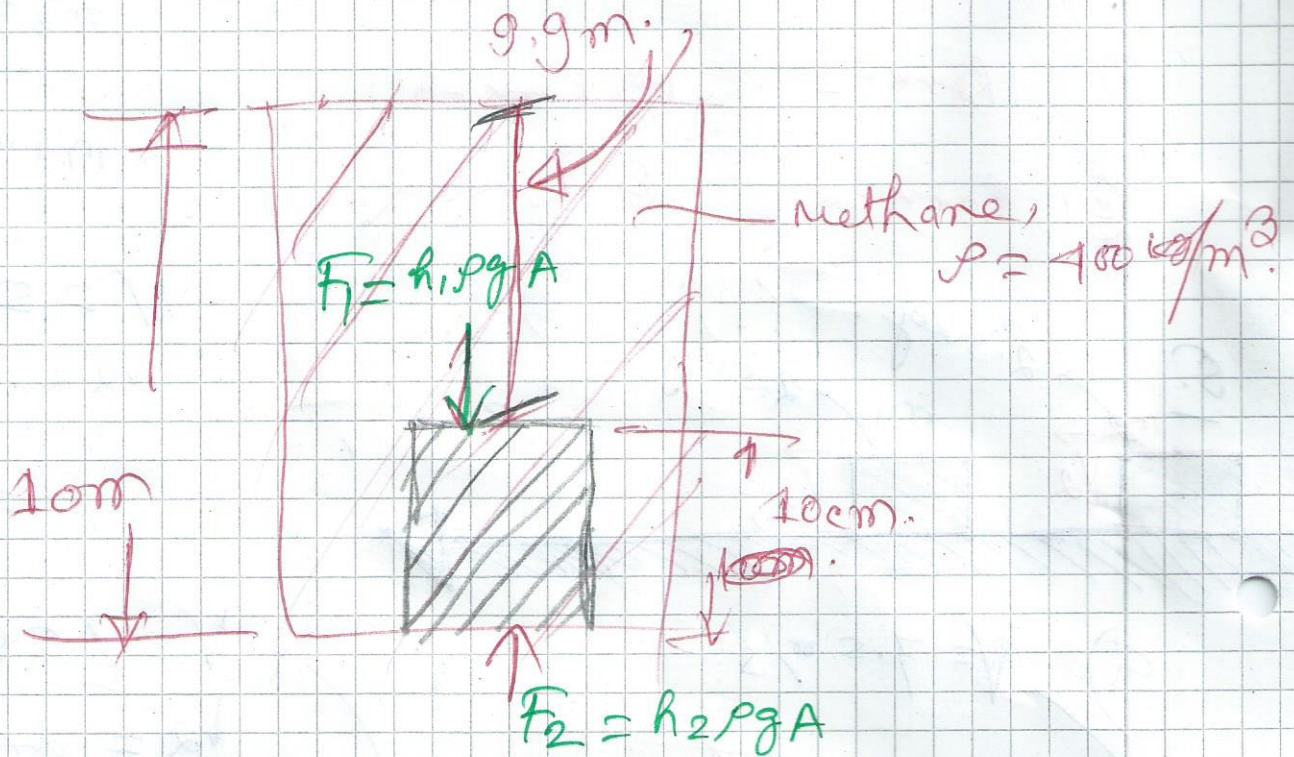


Total buoyant force of the object



$$F_1 = \rho_1 A = \rho g h_1 A$$

$$= 400 \text{ kg/m}^3 \times 0.425 \text{ m/s}^2 \times 9.9 \text{ m} \times 0.01 \text{ m}^2$$

$$= 16.83 \text{ N}$$

$$F_2 = \rho g h_2 A =$$

$$= 400 \text{ kg/m}^3 \times 10 \text{ m} \times 0.425 \text{ m/s}^2 \times 0.01 \text{ m}^2$$

$$= 17 \text{ N}$$

$$F_b = F_2 - F_1 = 17 \text{ N} - 16.83 \text{ N} = 0.17 \text{ N}$$

$$\text{Weight of box } W_b = 4 \text{ kg} \times 0.425 \text{ m/s}^2 = 1.7 \text{ N}$$