

LAB 13 - ARCHIMEDES' PRINCIPLE

PHYS 111

ISAAC WOODARD

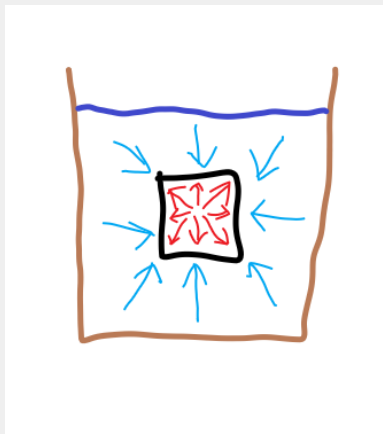
MAY 28, 2021

EQUATION 1

$$\rho = \frac{m}{V}$$

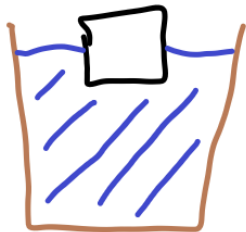
$$W = \rho_o Vg$$

BUOYANT FORCE

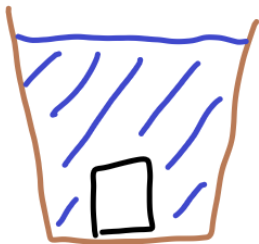


FLOATING VS. SINKING

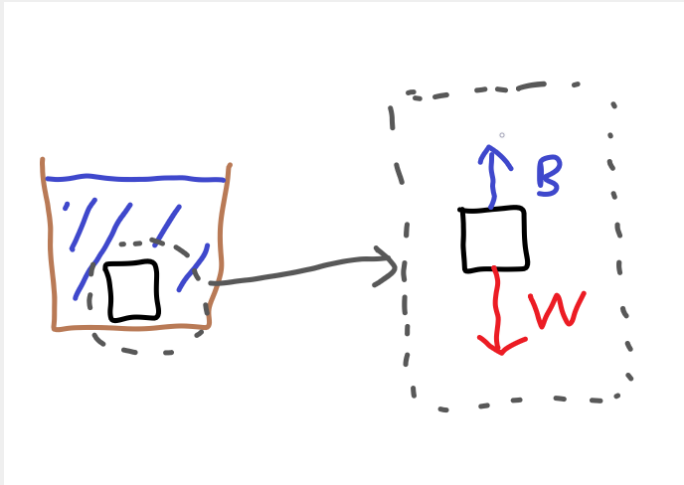
$$\rho_o < \rho_w$$



$$\rho_o > \rho_w$$



FORCE DIAGRAM



EQUATION 10

$$W = \rho_o Vg \quad (W_a)$$

$$B = \rho_w Vg \quad (W_a - W_w)$$

$$\rho_o = \frac{\rho_w}{1 - W_w/W_a}$$