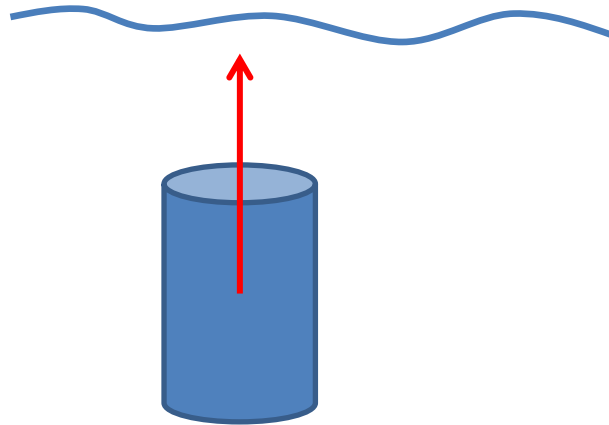


Density and Buoyancy

• Density:

$$\rho = \frac{\text{Mass}}{\text{Volume}}$$



$$\text{Bouyancy Force} = \rho_{\text{fluid}} V g$$

here V is the volume of the body, $g = 9.8\text{m/s}^2$.

Homework 26

Problem 1

The object weights 5 kg in the air and 3 kg in the liquid. What is the density of the liquid if the volume of the object is 100 cm³?



Problem 2 (bonus)

A crown weighs 500 grams in the air and 474 grams when fully submerged under water. Find the density of the material the crown is made out of, knowing that the density of water is 1000 kg/m³. Is this material silver or gold? (look up their densities in Google)