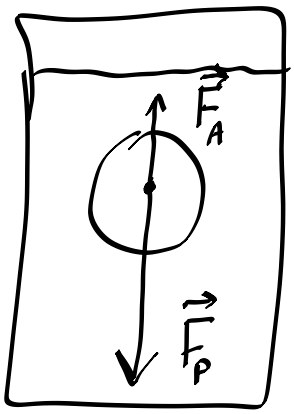
N 47




$d = 7{,}9 \times 10^3 \ kg/m^3$

$2R = 18 \ mm$

1) FORZA PESO

$$V = \frac{4}{3}\pi R^3 \Rightarrow F_P = mg = dVg = \left(7{,}9 \times 10^3 \frac{kg}{m^3}\right) \cdot \frac{4}{3}\pi \times (0{,}0090\ m)^3 \cdot \left(9{,}8 \frac{N}{kg}\right) \cong \boxed{2{,}4 \times 10^{-1}\ N}$$

2) SPINTA DI ARCHIMEDE

$$F_A = dVg = \left(10^3 \frac{kg}{m^3}\right) \cdot \frac{4}{3}\pi \cdot (0{,}0090\ m)^3 \cdot \left(9{,}8 \frac{N}{kg}\right) \cong \boxed{3{,}0 \times 10^{-2}\ N}$$

$d$ ↑ DENSITÀ DELL'$H_2O$

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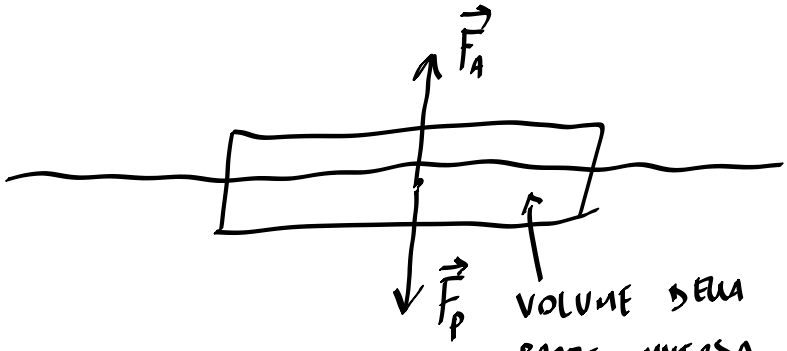



$m = 62\ kg$

$d_{H_2O} = 1025\ \frac{kg}{m^3}$

Per essere equilibrio deve essere

$$F_p = F_A$$

$$m g = d_{H_2O} \cdot V \cdot g$$

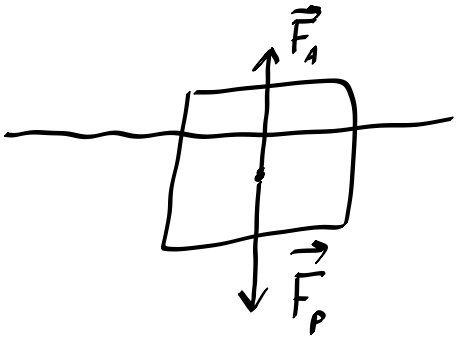
$V$: VOLUME DELLA PARTE IMMERSA

$$V = \frac{m}{d_{H_2O}} = \frac{62\ kg}{1025\ \frac{kg}{m^3}} = 0,060487\ldots\ m^3 \approx \boxed{6,0 \times 10^{-2}\ m^3}$$

N 57

$d_g = 917 \ \frac{kg}{m^3}$

$d_a = 1000 \ \frac{kg}{m^3}$




$F_p = F_A$

VOLUME PARTE IMMERSA

$m g = d_a V_i g$

$d_g \cdot V_{TOT} = d_a V_i$

VOLUME TOTALE

$\frac{V_i}{V_{TOT}} = \frac{d_g}{d_a} = \frac{917}{1000} = 0,917 \simeq 0,92$

PERCENTUALE IMMERSA 92 %

PERCENTUALE EMERSA 8 %

SE IN ACQUA SALATA

$\frac{V_i}{V_{TOT}} = \frac{d_g}{d_a} = \frac{917}{1025} \simeq 0,89$ IMMERSO => EMERGE DI PIÙ !!!