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Materia: física II

GRADO: 5TO SEMESTRE

GRUPO: Enfermería – bachillerato

## Problema 1

① Datos:

$$F = M \cdot g = (300 \text{ kg}) (9.8 \text{ m/s}^2)$$

$$A = 3.5 \text{ m} \\ A = 1.5 \text{ cm}^2$$

$$F = 2943 \text{ N} \cdot \frac{100,000 \text{ Din}}{1 \text{ N}}$$

$$M = 300 \text{ kg}$$

$$E = 1,962,000 \text{ Din/cm}^2$$

$$A = E = \frac{F}{A} = \frac{2,943,000 \text{ Din}}{1.5 \text{ cm}^2}$$

$$E = 1.962 \times 10^6 \text{ Din/cm}^2$$

$$B) = D_u = \frac{D_A}{a} = \frac{0.07 \text{ cm}}{350 \text{ cm}}$$

$$C) = \frac{F_a}{A N_w} = \frac{(2,943,000) (350 \text{ cm})}{(1.5 \text{ cm}^2) (0.07 \text{ cm})}$$

$$\textcircled{2} A = 0.375 \text{ mm} \quad \text{o} \quad 0.000375 \text{ m} \\ B = 2850 \text{ kg}$$

$$\textcircled{3} A = 2.6787 \times 10^8 \text{ cm/cm}^2 \\ B = 0.041 \text{ kg/cm}^2$$

$$\textcircled{4} F = 56,000 \text{ Din}$$

$$\textcircled{5} A = 7,798.7228 \text{ N/m}^2$$

$$\textcircled{6} m^3 = 3.27 \text{ m}^3$$

$$L = 3270 \text{ Litros}$$



$$\textcircled{7} \quad 189140 \text{ Nw/m}^3$$

$$\rho_2 = 143000 \text{ kg/m}^3 \cdot 9.81 \text{ m/s}^2$$

$$\textcircled{8} \quad 0.13274 \text{ m}^3$$

$$\rho_{\text{residual}} = 11300.23 \text{ kg/m}^3$$

$$\textcircled{10} \quad \text{Piston!}$$

$$A = 0.3 \text{ m}^2$$

$$\rho = 420 \text{ Nw/m}^2$$

$$F = \rho \cdot A$$

$$F = 420 \cdot 0.3$$

$$F = 126 \text{ Nw}$$

$$\textcircled{11} \quad A = 796.41 \text{ m}^2$$

$$\textcircled{12} \quad \mu = 78400 \text{ pN} \quad \text{"Presión Hidroestática"}$$

$$\textcircled{13} \quad \rho = \rho_0 \cdot g \cdot H$$

$$\rho = 5997.6$$