

$$15.) \quad \rho = 0,8 \frac{\text{g}}{\text{cm}^3} = 800 \frac{\text{kg}}{\text{m}^3}$$

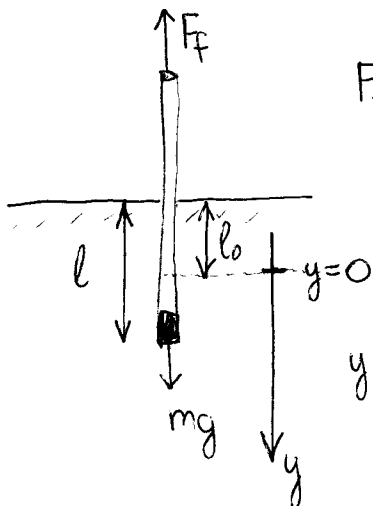
$$T = ?$$

Archimédész

$$m = 0,2 \text{ kg}$$

$$\boxed{F_f = m_{\text{foly}} \cdot g} \quad \boxed{\vec{a} = \frac{\vec{F}_e}{m}}$$

$$d = 0,4 \text{ cm} \quad r = 0,002 \text{ m} \quad A = r^2 \pi$$



$$F_f = l A \rho g$$

$$F_f = mg \quad \text{ha } l = l_0$$

$$l_0 A \rho g = mg$$

$$ma = mg - l A \rho g = l_0 A \rho g - l A \rho g$$

$$ma = -A \rho g (l - l_0) = -A \rho g y$$

$$\omega^2 = \frac{A \rho g}{m}$$

$$\begin{cases} a = -\frac{A \rho g}{m} y \\ a = -\omega^2 y \leftarrow \text{harmónikus rezgőmozgás} \end{cases}$$

$$\omega = \sqrt{\frac{A \rho g}{m}} = \frac{2\pi}{T}$$

$$T = 2\pi \sqrt{\frac{m}{A \rho g}} = 2\pi \sqrt{\frac{0,2}{1,2566 \cdot 10^{-5} \cdot 800 \cdot 10}} = \underline{\underline{8,862 \text{ s}}}$$