

n° 4 | PENDOLO

$$l = 1,2 \text{ m}$$

$$100 \text{ osc. in } 280 \text{ s} = T = \frac{280 \text{ s}}{100} = 2,8 \text{ s}$$

(A)  $T = 2\pi \sqrt{\frac{l}{g}}$

$$T^2 = 4\pi^2 \frac{l}{g}$$

$$g = \frac{4\pi^2 l}{T^2} = \frac{4\pi^2 \cdot 1,2 \text{ m}}{(2,8 \text{ s})^2} = \frac{4\pi^2 \cdot 1,2}{2,8^2} \frac{\text{m}}{\text{s}^2} = 6,04 \frac{\text{m}}{\text{s}^2}$$

(B)  $P_T = 800 \text{ N} = m g_T \rightarrow m = \frac{800 \text{ N}}{9,8 \frac{\text{m}}{\text{s}^2}} = 81,5 \text{ kg}$

$$P_{\text{PIAN. SC}} = m \cdot g = 81,5 \text{ kg} \cdot 6,04 \frac{\text{m}}{\text{s}^2} = 492,26 \text{ N}$$