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$$m = 80 \text{ Kg}$$

$$m_A = 1200 \text{ Kg}$$

$$x = 3,0 \text{ cm}$$

$$f = ?$$

$$mg = +K\Delta x$$

$$80 \text{ Kg} \cdot \frac{9,81 \text{ m}}{\text{s}^2} = K \cdot 0,03 \text{ m}$$

$$K = \frac{80 \text{ Kg} \cdot 9,81 \text{ m/s}^2}{0,03 \text{ m}} = 2,6 \cdot 10^4 \frac{\text{N}}{\text{m}}$$

$$f = \frac{1}{2\pi} \sqrt{\frac{K}{m}} = \frac{1}{2\pi} \sqrt{\frac{2,6 \cdot 10^4}{1280 \text{ Kg}}} = 0,72 \text{ Hz}$$

$$T = 2\pi \sqrt{\frac{m}{K}}$$

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Dati:

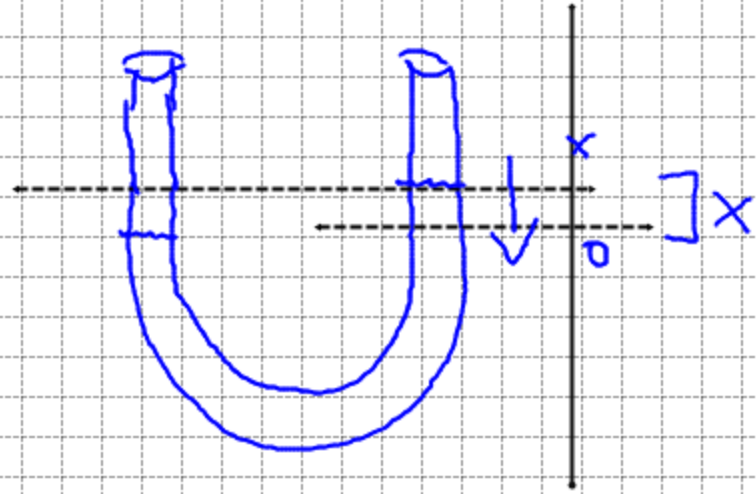
2/2

$$A = 1,6 \text{ cm}^2$$

$$m_{\text{Hg}} = 100 \text{ g}$$

$$d_{\text{HG}} = 13,6 \text{ g/cm}^3$$

$T = ?$



$$p = \frac{F}{A} \quad F_p = p \cdot A \quad F_p = d \cdot g \cdot 2x \cdot A$$

$$F_e = F_p$$

$$Kx = 2x(d \cdot g) \cdot A$$

$$K = 2(d \cdot g \cdot A)$$

$$K = 2(13,6 \text{ g/cm}^3 \cdot 9,81 \text{ m/s}^2 \cdot 1,6 \text{ cm}^2)$$

$$K = 2 \left(13,6 \frac{\text{g}}{\text{cm}^3} \cdot 9,81 \frac{\text{m}}{\text{s}^2} \cdot 1,6 \cdot 10^{-4} \text{ m}^2 \right)$$

$\frac{\text{g}}{\text{cm}^3} \cdot \frac{\text{m}}{\text{s}^2} \cdot \text{cm}^2$
 $\frac{\text{kg}}{\text{m}^3} \cdot \frac{\text{m}}{\text{s}^2} \cdot \text{m}^2$

$$K = 2 \left(13,6 \cdot 10^{-3} \frac{\text{kg}}{\text{m}^3} \cdot 9,81 \frac{\text{m}}{\text{s}^2} \cdot 1,6 \cdot 10^{-2} \text{ m}^2 \right)$$

$$K = 2 \left(13,6 \cdot 10^3 \frac{\text{N}}{\text{m}} \cdot 9,81 \cdot 1,6 \cdot 10^{-4} \right)$$

$$K = 426,9 \cdot 10^{-1} \frac{\text{N}}{\text{m}}$$

$$K = 42,7 \frac{\text{N}}{\text{m}}$$

$$T = 2\pi \sqrt{\frac{m}{K}}$$