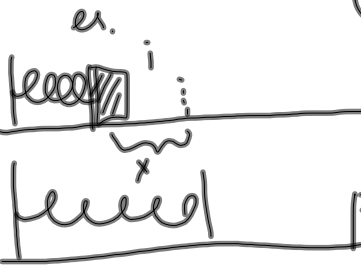


ENERGIA POT. ELASTICA

$$\vec{F}_e = -k \Delta \vec{x}$$

$$U_e = \frac{1}{2} k x^2$$



$x = 30 \text{ cm}$ $m = 30 \text{ g}$
 $k = 600 \frac{\text{N}}{\text{m}}$



$$E = U_e + K$$

$$E_i = U_e + K$$

$$E_f = K + U_e$$



$$E_i = \frac{1}{2} k x^2 = \frac{1}{2} m v^2 = E_f$$

$$v = \sqrt{\frac{k x^2}{m}} = \sqrt{\frac{600 \cdot (0,3)^2}{0,03}} = 42,4 \text{ m/s}$$

$$E_i = \frac{1}{2} k x^2 = \frac{1}{2} \cdot (600) \cdot (0,3)^2 = 27 \text{ J}$$



$$E = U_e + U_g + K$$

$$mgh = \frac{1}{2} k x^2$$

$$L = \Delta K$$

$$L = -\Delta U$$

$$\Delta K - L = 0$$

$$\Delta K + \Delta U = 0$$

$$\Delta E = 0$$

$$K_f - K_i + U_f - U_i = E_f - E_i = \Delta E$$