

## Ejercicio n° 10 - T1

Datos

$$x = 30 - 26 = 4 \text{ cm}$$

$$F = 3 \text{ N}$$

a) Calculamos la constante del resorte:

$$F = kx \Rightarrow k = \frac{F}{x} = \frac{3}{0.04} = 75 \text{ N/m}$$

luego la  $E_{p\text{elást}}$  =

$$E_{p_x} = \frac{1}{2} kx^2 = \frac{1}{2} 75 \cdot (0.04)^2 = 0.06 \text{ J}$$

$$b) E_{p_x} = E_c = \frac{1}{2} m v^2 \Rightarrow v = \sqrt{\frac{E_c \cdot 2}{m}} = \sqrt{\frac{0.06 \cdot 2}{0.120}} = \underline{\underline{1 \text{ m/s}}}$$