





PROBLEMA DINÁMICO

$$M_f \frac{d^2 s}{dt^2} = H s$$

$$s_0 = L - 0.44$$

$$s'_0 = 0$$

$$s(t) \quad \frac{ds}{dt} = V_0$$

$$g = 9.81 \frac{m}{s^2}$$

$$P = \frac{21}{1000} \quad H = \frac{14}{\frac{40}{100}}$$

PROBLEMA CINEMÁTICA

VERTICAL

$$\frac{d^2 y}{dt^2} = -g$$

$$y_0 = 2 \text{ m}$$

$$y'_0 = V_0 \sin\left(\frac{\pi}{4}\right) \frac{m}{s}$$

HORIZONTAL

$$\frac{dx}{dt} = V_0 \cos\left(\frac{\pi}{4}\right)$$

$$x_0 = 0$$