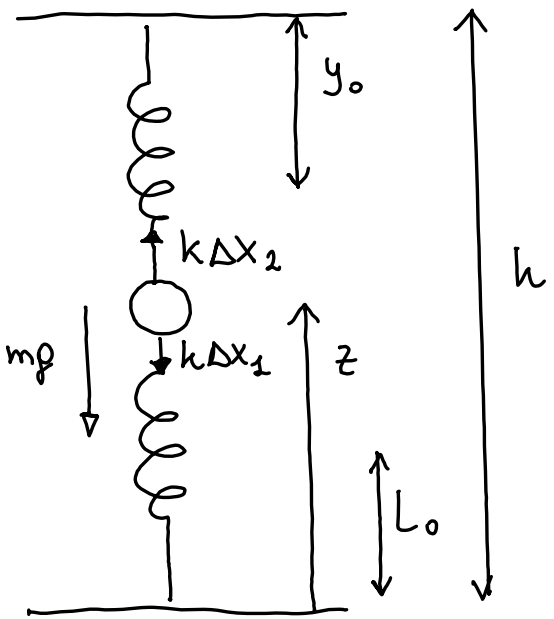
TDE 29/02/2021

ESERCIZIO 1

a)



EQUILIBRIO STATICO

$$k\Delta x_2 - k\Delta x_1 - mg = 0$$

$$\Delta x_2 = h - z_{eq} - L_0$$

$$\Delta x_1 = z_{eq} - L_0$$

$$k(h - z_{eq} - L_0) - k(z_{eq} - L_0) = mg$$

$$-2kz_{eq} + kh = mg \Rightarrow z_{eq} = \frac{h}{2} - \frac{mg}{2k}$$

$$z_{eq} = 1.5\ m - \frac{1kg \cdot 9.81 \frac{m}{s^2}}{220\ N/m} \simeq 1.25\ m$$