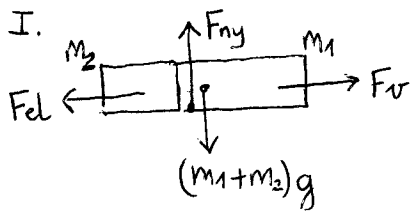


13.) $v_0 = 20 \frac{m}{s}$ $\mu = 0,01$ $m_1 = 400t$ $m_2 = 100t$ $d = ?$ $v_2 = 0$



$$\vec{a} = \frac{\vec{F}_e}{m}$$

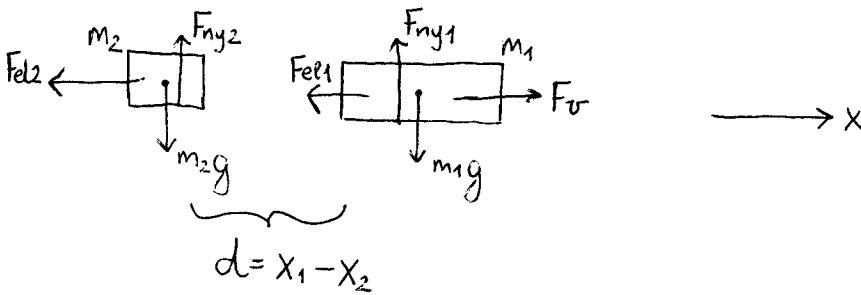
$$x = \frac{a_x}{2} t^2 + v_{0x} t + x_0$$

$$F_s = \mu F_{ny}$$

$$\Delta v_x = a_x \cdot \Delta t$$

I. $\vec{F}_e = 0$ ($\vec{v} = \text{!all}$)

$$\left. \begin{array}{l} (x) F_v = F_{el} = \mu F_{ny} \\ (y) F_{ny} = (m_1 + m_2)g \end{array} \right\} F_v = \mu(m_1 + m_2)g$$



$$(x) m_2 a_2 = -F_{el2}$$

$$(y) m_2 g = F_{ny2}$$

$$m_2 a_2 = -\mu F_{ny2} = -\mu m_2 g$$

$$a_2 = -\mu g$$

$$t = \frac{\Delta v_2}{a_2} = \frac{-v}{-\mu g} = \frac{v}{\mu g}$$

$$m_1 a_1 = F_v - F_{el1}$$

$$m_1 g = F_{ny1}$$

$$m_1 a_1 = \mu(m_1 + m_2)g - \mu m_1 g = \mu m_2 g$$

$$a_1 = \frac{\mu m_2 g}{m_1}$$

$$d = x_1 - x_2 = \frac{a_1}{2} t^2 + v_0 t - \frac{a_2}{2} t^2 - v_0 t = \dots$$