

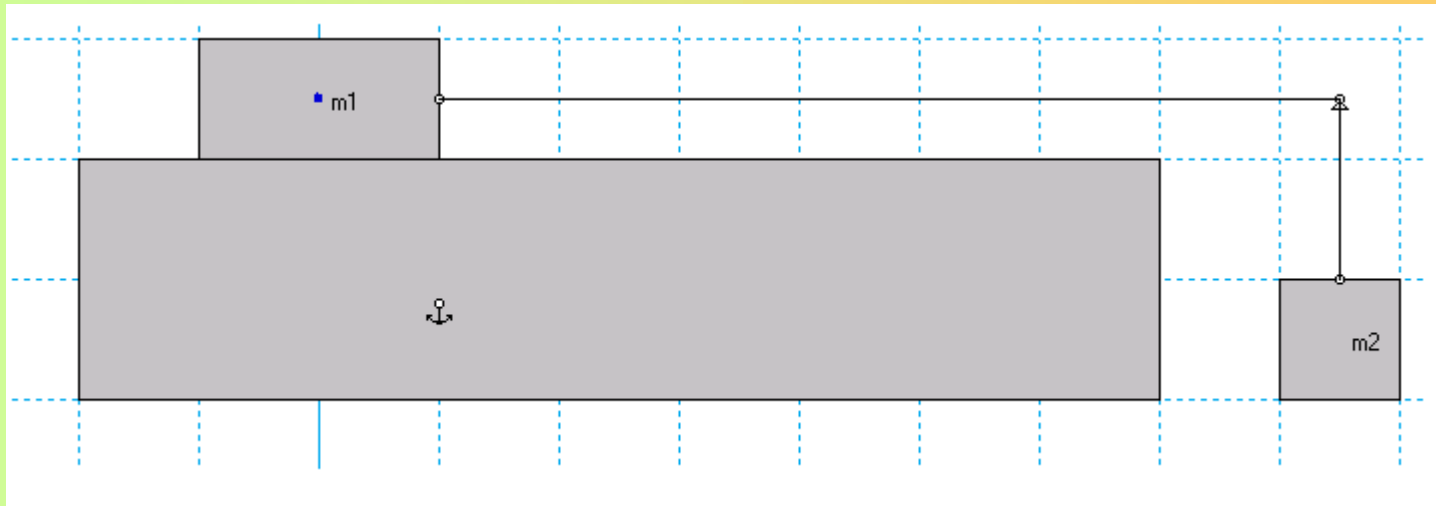
Plano horizontala: ariketa

Ariketa

Beheko plano horizontalean, kalkulatu:

- a) sistemaren azelerazioa
- b) tentsioak

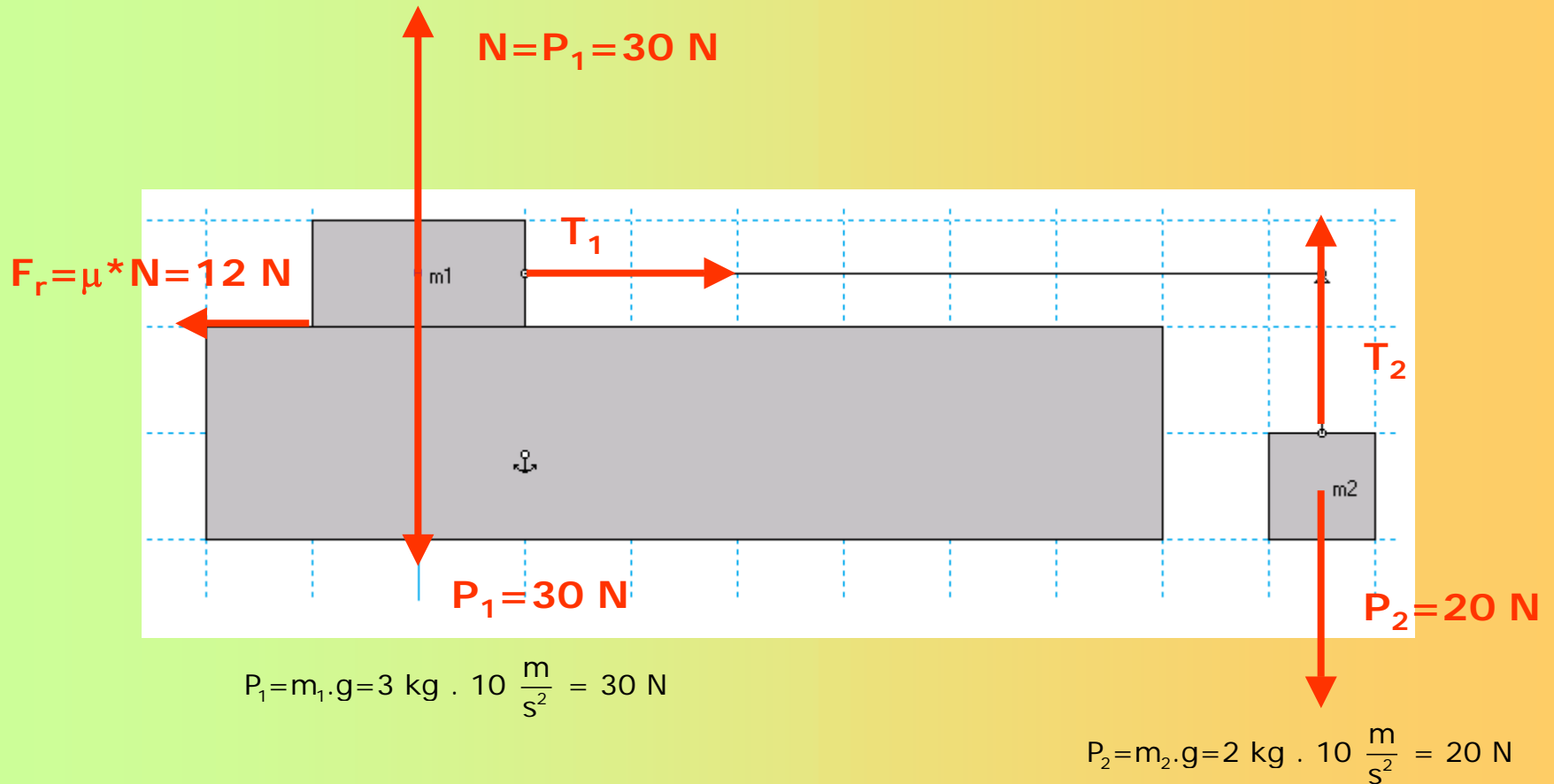
$m_1=3 \text{ kg}$; $m_2=2 \text{ kg}$; $\mu=0.4$



Plano horizontala: ariketa

Erantzuna

1) Lehenengoz indarrak marraztu eta balioak kalkulatu ditugu



Plano horizontala: ariketa

Erantzuna

2) 2. legea aplikatuz

Indar total bertikala 0 da

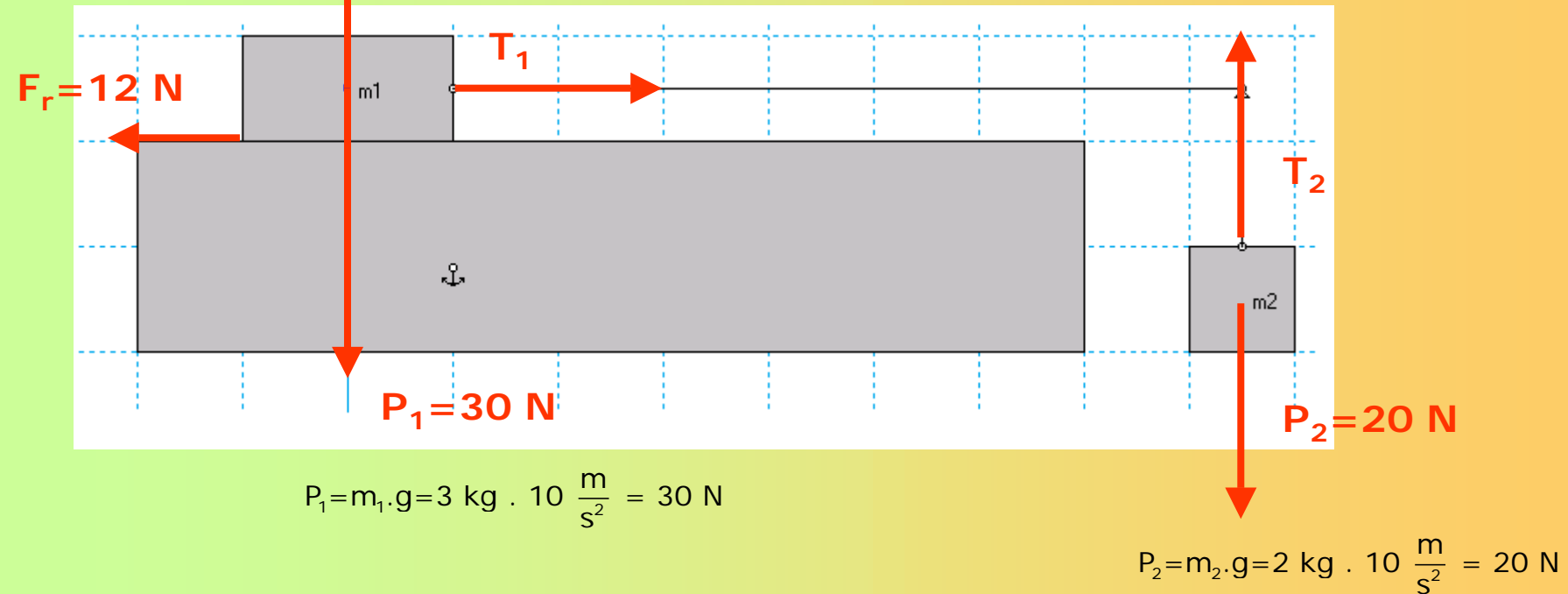
$$N = P_1 = 30 \text{ N}$$

Newton-en ekuazioa:

$$m_T = 3 \text{ kg} + 2 \text{ kg} = 5 \text{ kg}$$

$$F_{\text{tot}} = m_T \cdot a \rightarrow F_{\text{tot}} = 20 \text{ N} - T_2 + T_1 - 12 \text{ N} = 8 \text{ N} \rightarrow 8 \text{ N} = 5 \text{ kg} \cdot a$$

$$a = \frac{8 \text{ N}}{5 \text{ kg}} = 1,6 \frac{\text{m}}{\text{s}^2}$$



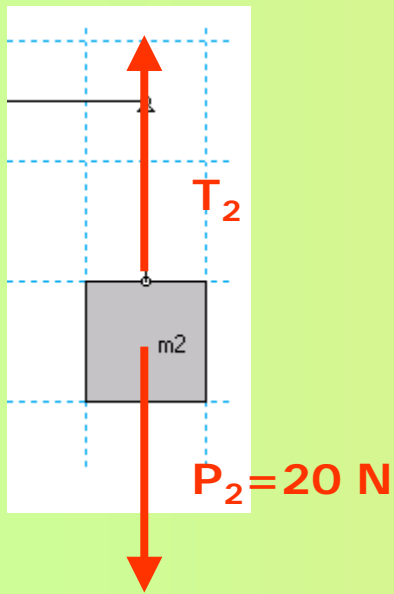
Plano horizontala: ariketa

Erantzuna

3) 2. legea gorputz bakar bati aplikatuz

$$F_T = m \cdot a \rightarrow 20 \text{ N} - T_2 = 2 \text{ kg} \cdot 1,6 \frac{\text{m}}{\text{s}^2} = 3,2 \text{ N}$$

$$T_2 = 20 \text{ N} - 3,2 \text{ N} = 16,8 \text{ N} = T_1$$



$$P_2 = m_2 \cdot g = 2 \text{ kg} \cdot 10 \frac{\text{m}}{\text{s}^2} = 20 \text{ N}$$