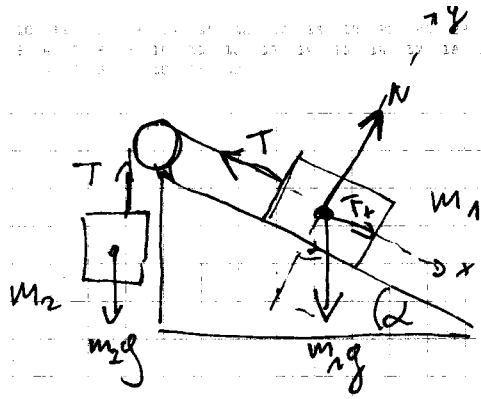


ZAD. 1



Dane:

- $\sin \alpha = 0,6$
- $m_1 = 0,4 \text{ kg}$
- $\mu_n = 0,4$
- $m_2 = 0,6 \text{ kg}$

Suchane:

- $\alpha = ?$
- $T = ?$

Ruch  $m_2$

(1)

$$m_2g - T = m_2a$$

Ruch  $m_1$

(2)

$$T - m_1g \cos \alpha - m_1g \sin \alpha \mu_n = m_1a$$

$$m_2g - m_1g \cos \alpha - m_1g \sin \alpha \mu_n = m_1a + m_2a$$

$$a = \frac{g (m_2 - m_1 \cos \alpha - m_1 \sin \alpha \mu_n)}{m_1 + m_2}$$

$$a = \frac{10 \frac{\text{m}}{\text{s}^2} (0,6 \text{ kg} - 0,4 \text{ kg} \cdot 0,8 - 0,4 \text{ kg} \cdot 0,6 \cdot 0,4)}{(0,6 + 0,4) \text{ kg}}$$

$$\cos^2 \alpha + \sin^2 \alpha = 1$$

$$\cos \alpha = \sqrt{1 - \sin^2 \alpha}$$

$$\cos \alpha = \sqrt{1 - 0,36}$$

$$\cos \alpha = \sqrt{0,64}$$

$$\cos \alpha = 0,8$$

$a =$