

$$1) P - T = M\sqrt{2}a$$

$$2) T \cos 45^\circ - M g \cos 45^\circ = M \cdot a \cos 45^\circ$$

$$\left\{ \begin{array}{l} M\sqrt{2}g - T = \sqrt{2}Ma \\ T \cos 45^\circ - M g \cos 45^\circ = Ma \cos 45^\circ \end{array} \right.$$

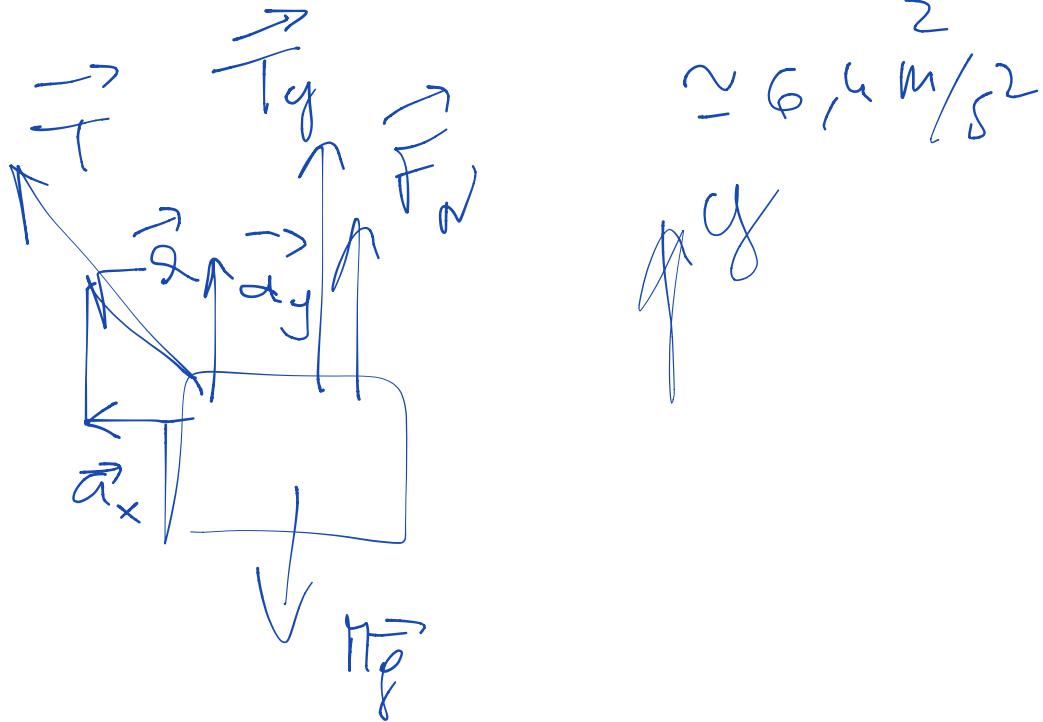
$$T = M\sqrt{2}g - M\sqrt{2}a$$

$$M\sqrt{2}(g-a)\cos 45^\circ - g, 8 M \cos 45^\circ =$$

$$= Ma \cos 45^\circ$$

$$g - a = g, 8 M \cos 45^\circ = a \cos 45^\circ$$

$$\alpha = \frac{g_1 \delta - g_1 \gamma M_S}{1 + \cos \theta S} = \frac{g_1 \delta}{1 + \frac{\sqrt{2}}{2}} =$$



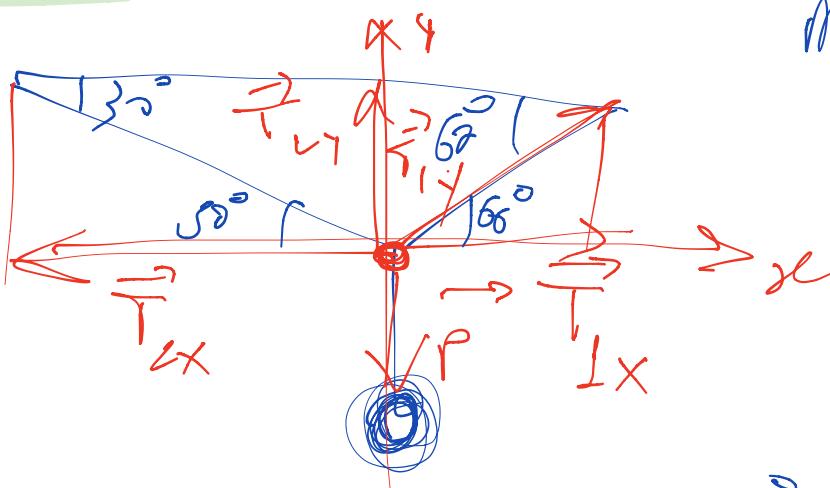
$$\approx 6.4 \text{ m/s}^2$$

μ_k

$$F_N + T \sin \theta = M_g + \mu_k M_g \sin \theta$$

n. 24

$$m = 5 \text{ kg}$$



$$T_1 \cos 60^\circ - T_2 \cos 30^\circ = 0$$

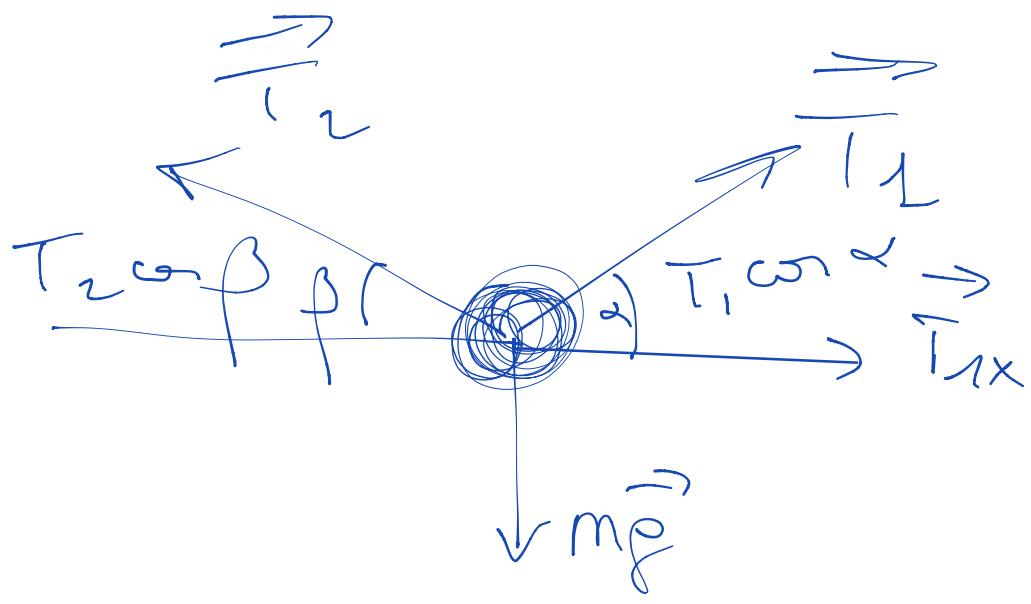
$$T_1 \sin 60^\circ + T_2 \sin 30^\circ - mg = 0$$

$$\frac{T_1}{2} - \frac{T_2}{2}\sqrt{3} = 0$$

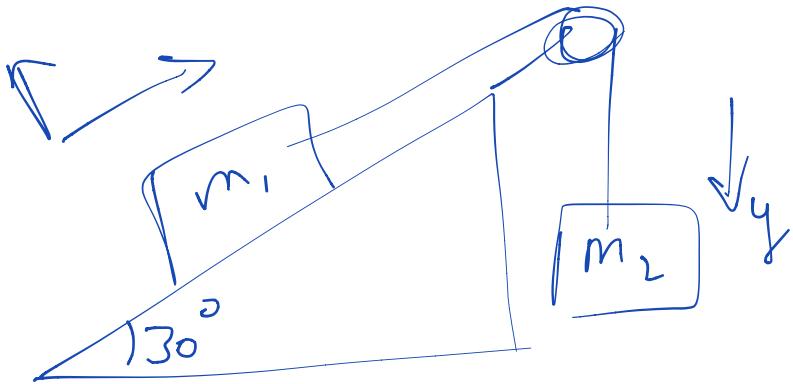
$$\frac{T_1\sqrt{3}}{2} + \frac{T_2}{2} = 2mg$$

$$4T_2 = 2mg \quad T_2 = \frac{mg}{2} = 2,5 \text{ N}$$

$$T_1 = \sqrt{3}T_2 = 4,6 \text{ N}$$



n. 29



$$m_2 = 12 \text{ kg}$$

$$\beta = 30^\circ$$

$$m_1 = 3 \text{ kg}$$

$$\mu = 0,2$$

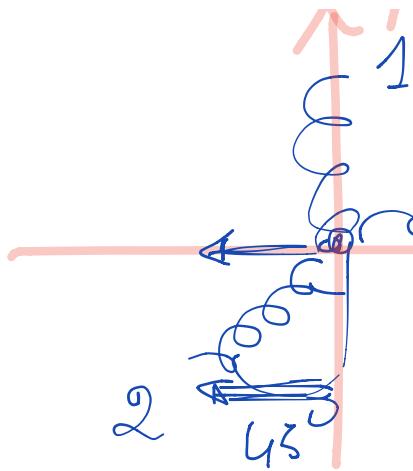
$$\left\{ \begin{array}{l} T - \mu m_1 g \cos 30^\circ - m_1 g \sin 30^\circ = m_1 a \\ m_2 g - T = m_2 a \end{array} \right.$$

$$T = \mu m_1 g \cos 30^\circ + m_1 g \sin 30^\circ + m_1 a$$

$$m_2 g - \mu m_1 g \cos 30^\circ - m_1 g \sin 30^\circ - m_1 a = m_2 a$$

$$a = \frac{m_2 g - \mu m_1 g \cos 30^\circ - m_1 g \sin 30^\circ}{m_1 + m_2}$$

n. 35



$$L_0 = 0,12 \text{ m}$$

$$K_1 = 160 \text{ N/m}$$

$$\times K_2 = 240 \text{ N/m}$$

$$K_3 = 120 \text{ N/m}$$

$$\Delta L_1 = 0,04 \text{ m}$$

$$\begin{cases} K_3 \Delta L_3 - K_2 \Delta L_2 \sin 45^\circ = 0 \\ K_1 \Delta L_1 - K_2 \Delta L_2 \cos 45^\circ = 0 \end{cases}$$

$$\Delta L_2 = \frac{K_1 \Delta L_1}{K_2 \cos 45^\circ} = \frac{6,4}{9,1} = 0,04$$