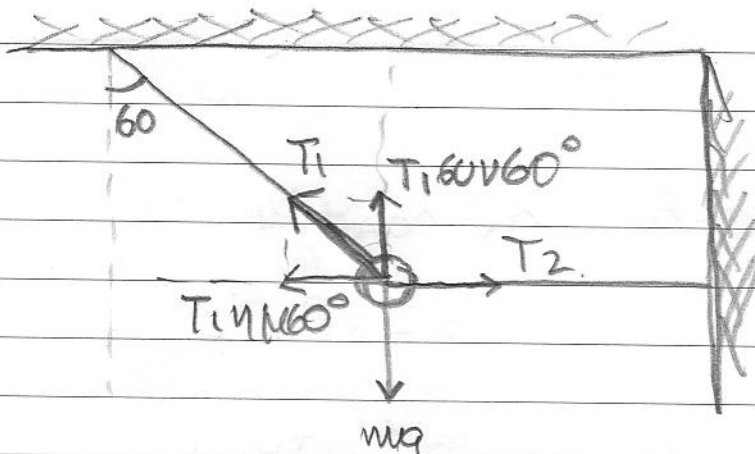




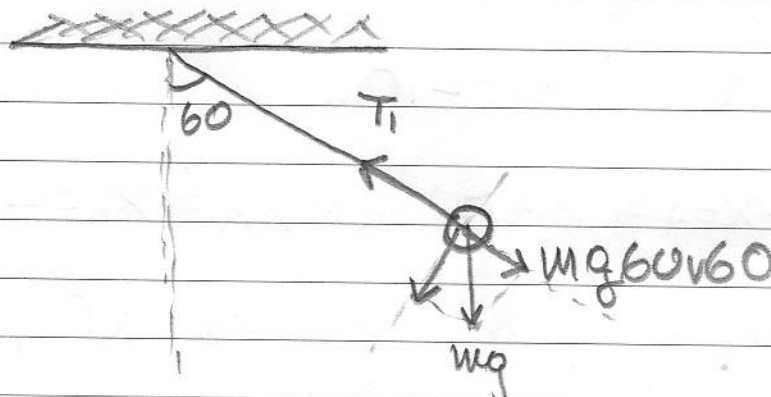
Λύση



$$1) \Sigma F_x = 0 \Rightarrow T_1 \sin 60^\circ = T_2$$

$$\Sigma F_y = 0 \Rightarrow T_1 \cos 60^\circ = mg \Rightarrow \frac{T_1}{2} = 2 \Rightarrow T_1 = 4 \text{ N}$$

2)



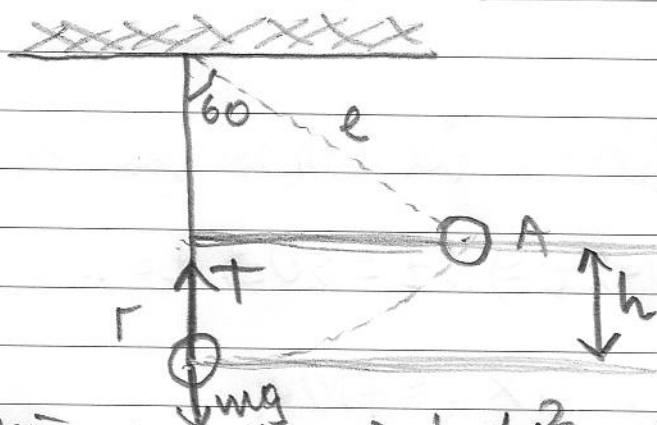
$$\Sigma F_R = \frac{mV^2}{R} \Rightarrow$$

$$T_1 - mg \cos 60^\circ = 0 \Rightarrow$$

$$T_1 = mg \cos 60^\circ \Rightarrow$$

$$T_1 = 1 \text{ N}$$

3)



$$h = l - l \cos 60^\circ \Rightarrow$$

$$h = \frac{l}{2} = 0,5 \text{ m}$$

$$\text{ΘΜΚΕ: } \Delta K = W_{os} \Rightarrow \frac{1}{2} mV^2 = mgh \Rightarrow V = \sqrt{2gh} = \sqrt{10} \frac{\text{m}}{\text{s}}$$

$$\Sigma F_R = \frac{mV^2}{R} \Rightarrow T - mg = \frac{mV^2}{R} \Rightarrow T = mg + \frac{mV^2}{R} = 2 + 2 = 4 \text{ N}$$