



1. ZADATOK (Dva grupe)

(1) Kinematika veza: $\dot{x}_1 = \dot{x}_2 = \dot{x}$ $x_1 = x_2 + \text{const}$ $\frac{d}{dt} \Rightarrow \ddot{x}_1 = \ddot{x}_2$

(Slozi izvod) $\ddot{x}_1 = \ddot{x}_2$

(2) Druzi uslovi za tenete A i B

$$m_A \ddot{a}_A = m_A \vec{g} + \vec{S}_1 + \vec{N}_A \quad m_B \ddot{a}_B = m_B \vec{g} + \vec{S}_2 + \vec{N}_B$$

$$m \ddot{x} = S_1 \quad \oplus \quad 2m \ddot{x} = 2mg \sin 30^\circ - S_2$$

$$\Downarrow \quad 3m \ddot{x} = mg \Rightarrow \boxed{\ddot{x} = \frac{g}{3}} \quad \boxed{S_1 = \frac{mg}{3}}$$

2. ZADATOK

- 1. Grupa $m_B = m$
- 2. Grupa $m_B = 2m$

(1) Kinematika veza $x_A = x \Rightarrow \dot{x}_A = \dot{x}$

(2) Druzi uslovi za tenete A i B

$$m_A \ddot{a}_A = \vec{S}_1 + m_A \vec{g}$$

$$m_B \ddot{a}_B = 2m \vec{g} + \vec{S}_3$$

$$m \ddot{x} = S_1 - mg \quad \oplus$$

$$\begin{cases} \text{1. Grupa: } m \left(\frac{\ddot{x}}{2} \right) = mg - S_3 \\ \text{2. Grupa: } 2m \left(\frac{\ddot{x}}{2} \right) = 2mg - S_3 \end{cases}$$

$$\text{1. Grupa: } \boxed{\ddot{x} = -\frac{2}{3}g}$$

$$\text{2. Grupa: } \boxed{\ddot{x} = 0}$$

$$\Downarrow \quad S_1 = mg + m \ddot{x} \Rightarrow \dots$$

$$S_1 = mg + m \ddot{x} \Rightarrow \dots$$

