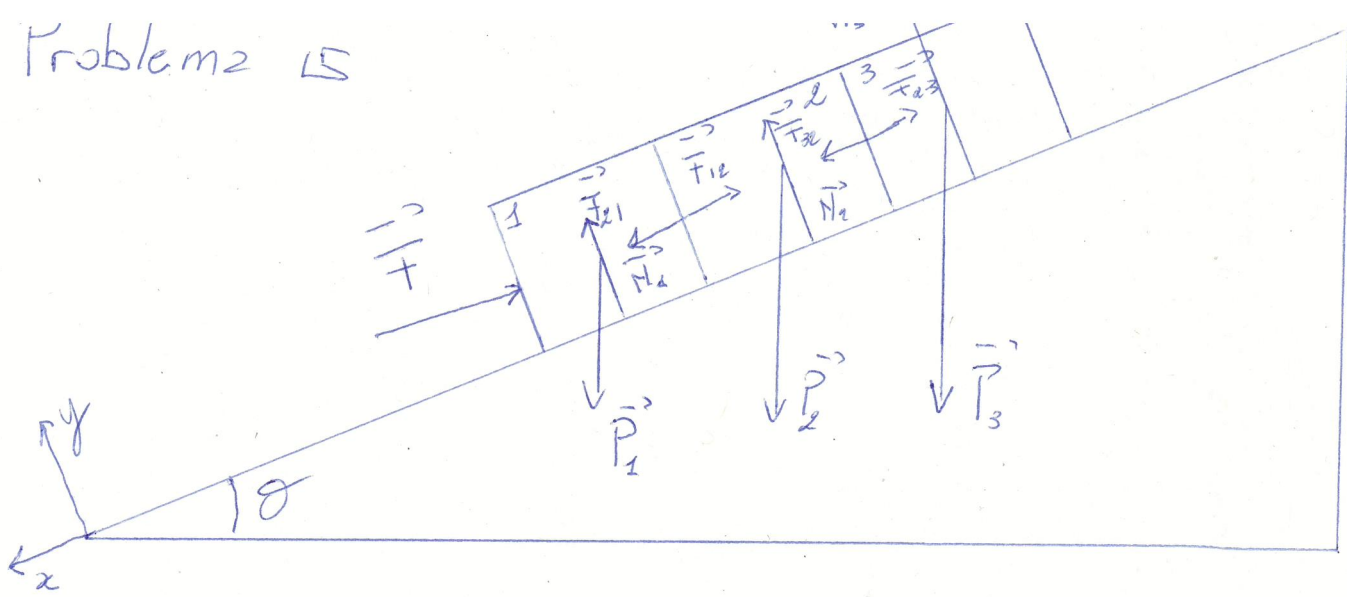


Problem 2 15



$$\vec{F} + \vec{P}_1 + \vec{N}_1 + \vec{T}_{21} = m_1 \vec{a}_1$$

$$\vec{P}_2 + \vec{T}_{12} + \vec{N}_2 + \vec{T}_{32} = m_2 \vec{a}_2$$

$$\vec{P}_3 + \vec{T}_{23} + \vec{N}_3 = m_3 \vec{a}_3$$

$$\vec{a}_1 = \vec{a}_2 = \vec{a}_3 = a \hat{u}$$

$$\vec{T}_{21} = -\vec{T}_{12}$$

$$\vec{T}_{32} = -\vec{T}_{23}$$

lungo x

$$-F + m_1 g \sin \theta + T_{21} = m_1 a$$

$$m_2 g \sin \theta - T_{21} + T_{32} = m_2 a$$

$$m_3 g \sin \theta - T_{32} = m_3 a$$

⇓ sommando

$$g \sin \theta (m_1 + m_2 + m_3) - F = (m_1 + m_2 + m_3) a$$

in più so che

$$a = \frac{m_2 g \sin \theta - T_{21} + T_{32}}{m_2} = 2,4 \text{ m/s}^2 = 37,5 \text{ N}$$

lungo y

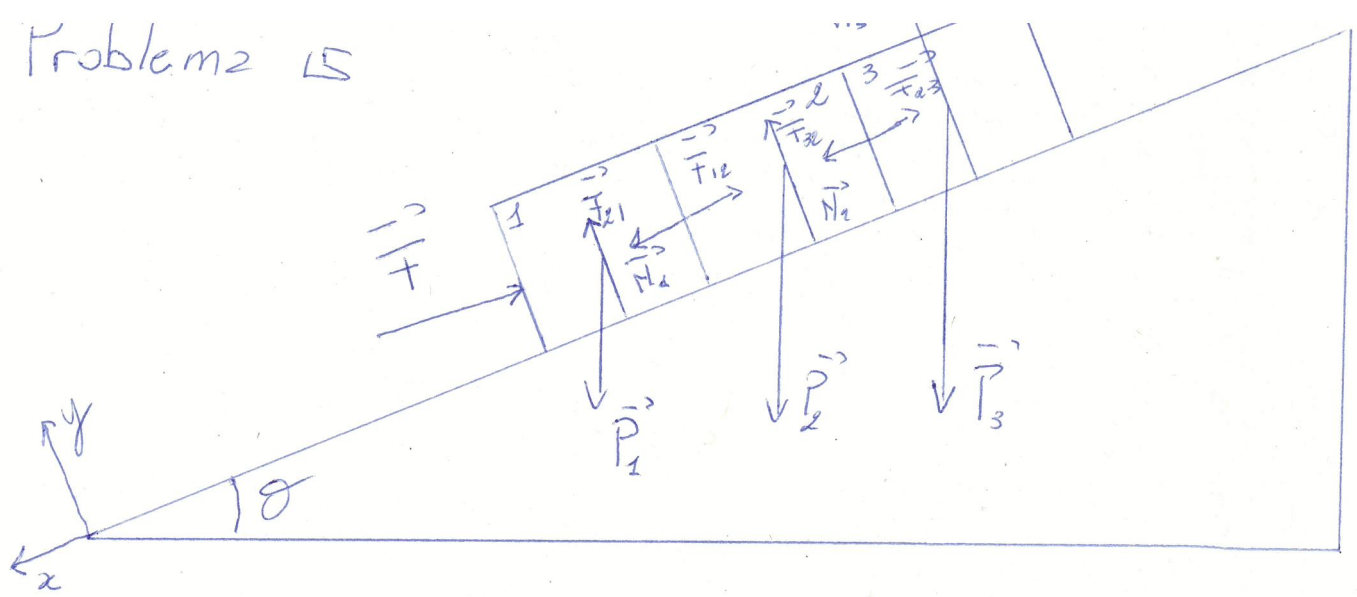
$$+ N_1 - m_1 g \cos \theta = 0$$

$$N_2 - m_2 g \cos \theta = 0$$

so che

$$m_2 g \sin \theta - T_{21} + T_{32} = 0,4$$

Problem 2 15



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lungo x

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⇓ sommando

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lungo y

$$+ N_1 - m_1 g \cos \theta = 0$$

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$$m_2 g \sin \theta - F_{21} + F_{32} = 0,4$$