

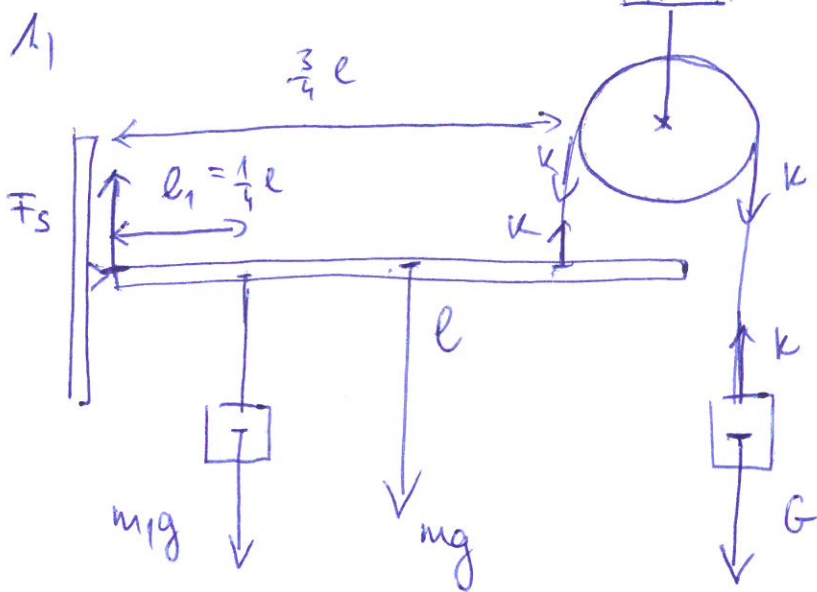


Fig. 3.

$$\sum F = 0$$

$$\boxed{\sum M = 0}$$

$$m_1 g \frac{l}{4} + mg \frac{l}{2} = k \cdot \frac{3}{4} l$$

$$\frac{m_1 g}{4} + \frac{mg}{2} = \frac{3}{4} k \quad \Leftarrow k = G$$

$$\frac{m_1 g}{4} + \frac{mg}{2} = \frac{3}{4} G \quad / \cdot 4$$

$$m_1 g + 2mg = 3G$$

$$\frac{m_1 g}{3} + \frac{2}{3} mg = G$$

$$G = \frac{3 \cdot 4 \cdot 10 \sqrt{2}}{3} + \frac{2}{3} \cdot 4 \cdot 5 \cdot 10 \sqrt{2} = 40 \text{ N}$$

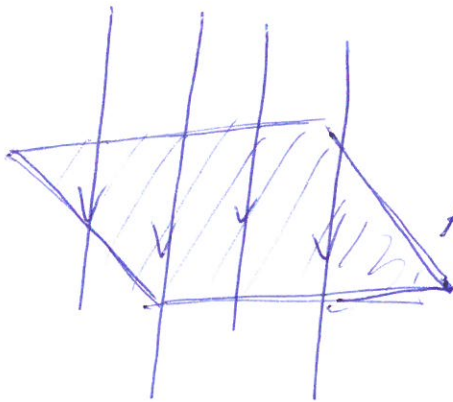
$$F_S + K = m_1 g + m g$$

$$F_S = m_1 g + m g - K = (B_1 + m) g - K = (3g + 4,5g) \cdot 10 \frac{m}{s^2} - 40N$$

$$= \underline{\underline{35N}} \quad \text{Nach oben.}$$

783

2.



$$A = 24 \text{ cm}^2 = 0,0024 \text{ m}^2$$

$$B = 1 \text{ T} = 1 \frac{\text{Vs}}{\text{m}^2} \quad \Delta t = 0,2 \text{ s}$$

$$\Delta B = 0,2 \text{ T}$$

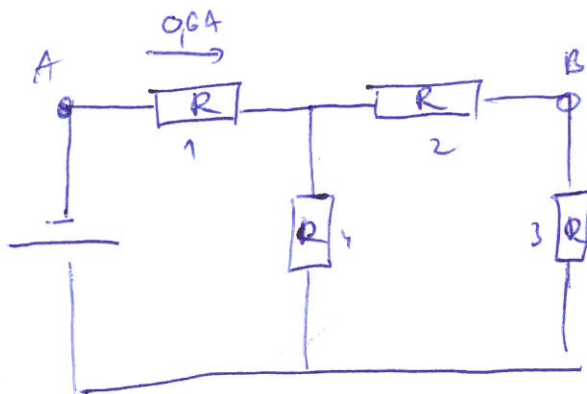
$$U_i = \frac{\Delta \Phi}{\Delta t} = \frac{\Delta(BA)}{\Delta t} = \frac{\frac{1}{2} (1 \frac{\text{Vs}}{\text{m}^2} \cdot 0,0024 \text{ m}^2)}{0,2 \text{ s}} = 0,006 \text{ V}$$

$$6 \text{ mV}$$

$$R = 3 \Omega$$

$$I_i = \frac{U_i}{R} = \frac{6 \text{ mV}}{3 \Omega} = 2 \text{ mA}$$

3.



$$U = 10 \text{ V}$$

$$R = 10 \Omega$$

$$U_{AB} = ?$$

$$U_{AB} = U_1 + U_2 = 8 \text{ V}$$

$$R_e = \frac{2R \cdot R}{2R + R} + R = \frac{2R^2}{3R} + \frac{3}{3}R = \frac{5}{3}R$$

$$I = \frac{U}{R_e} = \frac{10 \text{ V}}{\frac{5}{3} 10 \Omega} = \frac{3}{5} \text{ A} = 0,6 \text{ A}$$

$$U_1 = IR = 0,6 \text{ A} \cdot 10 \Omega = 6 \text{ V}$$

$$U_{23} = U - U_1 = 4 \text{ V} \rightarrow I_{23} = \frac{U_{23}}{R_{23}} = \frac{4 \text{ V}}{20 \Omega} = 0,2 \text{ A} \rightarrow U_2 = I_{23} \cdot R = 2 \text{ V}$$