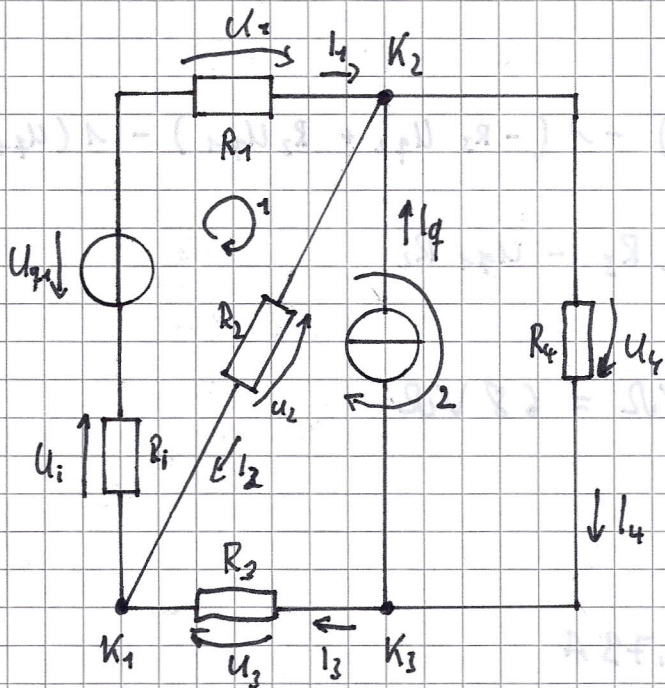


$$U_1 = I_1 R_1 = -1,794 \cdot 1\Omega = -1,79 \text{ V}$$

$$U_2 = I_2 R_2 = 2,11 \text{ A} \cdot 2\Omega = 4,22 \text{ V}$$

$$U_3 = I_3 R_3 = 0,32 \text{ A} \cdot 12\Omega = 3,84 \text{ V}$$

Beispiel 2:



$$z = 4$$

$$k = 3$$

$$m = 2$$

$$M_1: U_i - U_q + U_1 + U_2 = 0$$

$$M_2: -U_2 + U_4 + U_3 = 0$$

$$M_1': I_1(R_i + R_1) + R_2 I_2 = U_q$$

$$M_2': -I_2 R_2 + I_3 R_3 + I_4 R_4 = 0$$

$$K_1: -I_1 + I_2 + I_3 = 0$$

$$K_2: -I_2 + I_1 + I_q - I_4 = 0$$

$$\text{I} \quad -I_1 + I_2 + I_3 + 0 \cdot I_4 = 0$$

$$\text{II} \quad I_1 - I_2 + 0 \cdot I_3 - I_4 = -I_q$$

$$\text{III} \quad I_1(R_i + R_1) + I_2 R_2 + 0 \cdot I_3 + 0 \cdot I_4 = U_q$$

$$\text{IV} \quad I_1 \cdot 0 - I_2 R_2 + I_3 R_3 + I_4 R_4 = 0$$

$$\begin{pmatrix} I_1 \\ I_2 \\ I_3 \\ I_4 \end{pmatrix} \begin{pmatrix} -1 & 1 & 1 & 0 \\ 1 & -1 & 0 & -1 \\ (R_i + R_1) & R_2 & 0 & 0 \\ 0 & -R_2 & R_3 & R_4 \end{pmatrix} = \begin{pmatrix} 0 \\ -I_q \\ U_q \\ 0 \end{pmatrix}$$