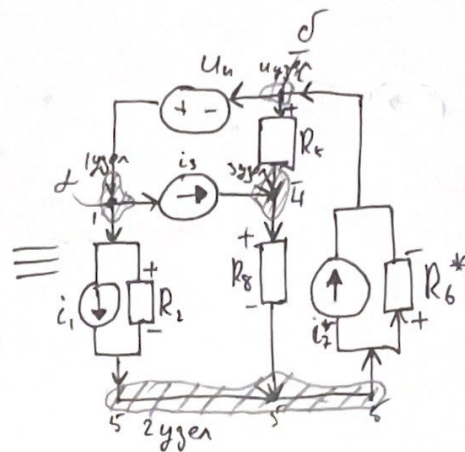
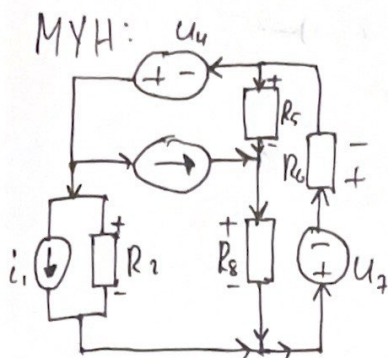


$$i_6 = i_3^k - i_1^k = -2 - (-3) = -2 + 3 = 1 \text{ A}$$

Ответ:  $i_6 = 1 \text{ A}$ .

ММН:



$$R_6^* = R_6 = 2 \text{ Ohm}$$

$$i_7^* = \frac{U_2}{R_6} = \frac{2}{2} = 1 \text{ A}$$

$$N_{\text{ММН}} = N_{\text{ЗТН}} = N_y - 1 = 3 \text{ yp.}$$

$$N_{\text{yp.}} = N_{\text{ММН}} - N_{\text{ЗТН}} = 2 \text{ yp.}$$

Введём безымянные узлы в схему (d.y.):

$$U_0^y = 0 \text{ B} = U_4^y$$

$$U_2^y = U_0^y = 0 \text{ B}$$

$$U_n = 2 \text{ B} = U_1^y - U_4^y \Rightarrow U_n = U_1^y = 2 \text{ B}$$

$$\begin{cases} U_1^y = U_n = 2 \text{ B} \\ G_{21} \cdot U_1^y + G_{22} \cdot U_2^y + G_{23} \cdot U_3^y = i_2^y \\ G_{31} \cdot U_1^y + G_{32} \cdot U_2^y + G_{33} \cdot U_3^y = i_3^y \end{cases}$$

$$\begin{cases} U_1^y = U_n = 2 \text{ B} \\ -\frac{1}{2} \cdot 2 + \frac{3}{2} U_2^y - \frac{1}{2} U_3^y = 1 \\ 0 \cdot 2 - \frac{1}{2} \cdot U_2^y + 1 \cdot U_3^y = 2 \end{cases}$$

$$\begin{cases} \frac{3}{2} U_2^y - \frac{1}{2} U_3^y = 2 \\ -\frac{1}{2} U_2^y + U_3^y = 2 \end{cases} \quad \begin{cases} 3U_2^y - U_3^y = 4 \\ -U_2^y + 2U_3^y = 4 \end{cases}$$

$$\Delta = \begin{vmatrix} 3 & -1 \\ -1 & 2 \end{vmatrix} = 6 - 1 = 5 \quad \Delta_1 = \begin{vmatrix} 4 & -1 \\ 4 & 2 \end{vmatrix} = 8 + 4 = 12$$

$$\Delta_2 = \begin{vmatrix} 3 & 4 \\ -1 & 4 \end{vmatrix} = 12 - 4 = 8 \quad U_2^y = \frac{\Delta_1}{\Delta} = \frac{12}{5} = 2,4 \text{ B} \\ U_3^y = \frac{\Delta_2}{\Delta} = \frac{8}{5} = 1,6 \text{ B}$$

$$\varphi_1 = U_1^y = 2 \text{ B}$$

$$\varphi_2 = U_2^y = 2,4 \text{ B}$$

$$\varphi_3 = U_3^y = 1,6 \text{ B}$$

$$U_6 = U_2^y - U_4^y = 2,4 \text{ B}$$

$$i_6 = G_6 \cdot U_6 = \frac{1}{2} \cdot 2,4 = 1,2 \text{ A}$$