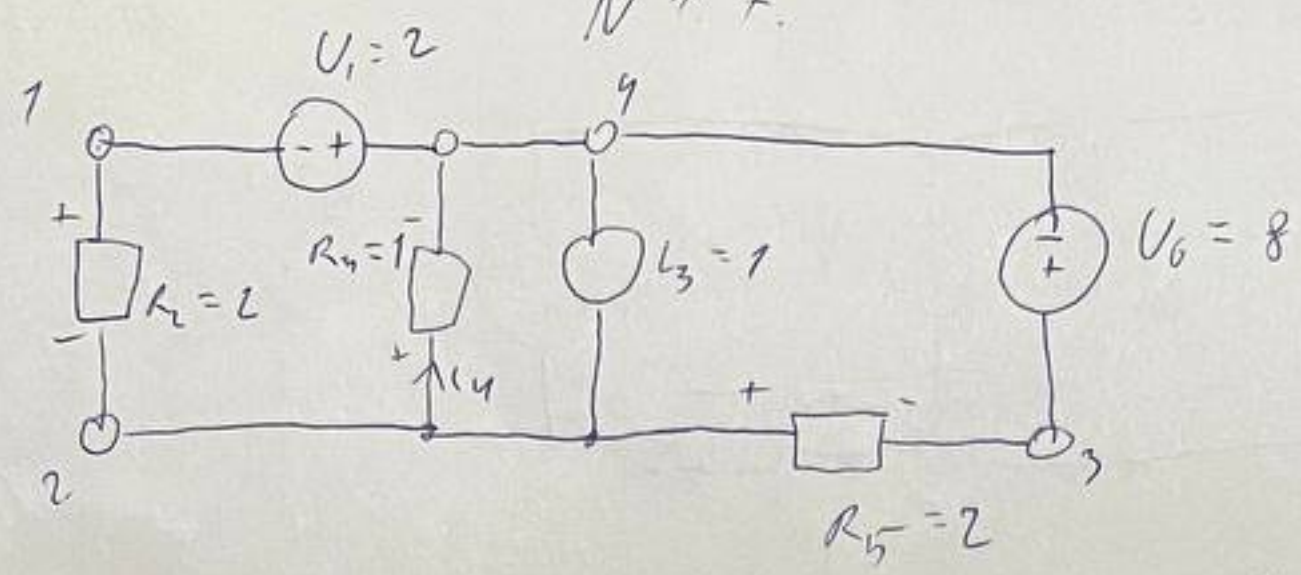
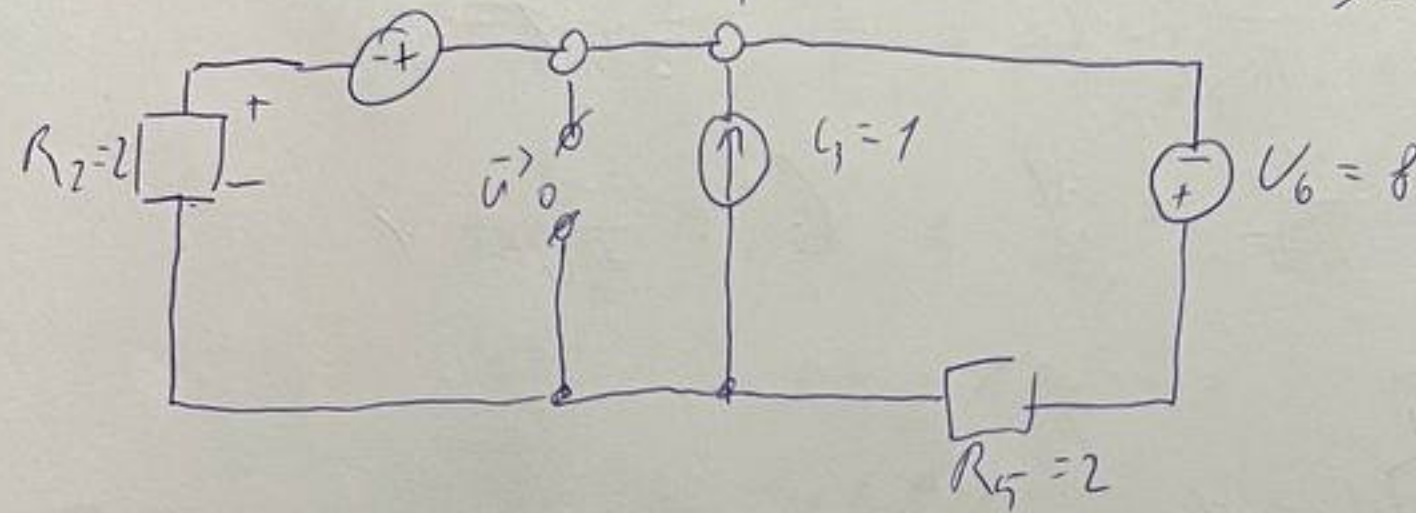
N 17.

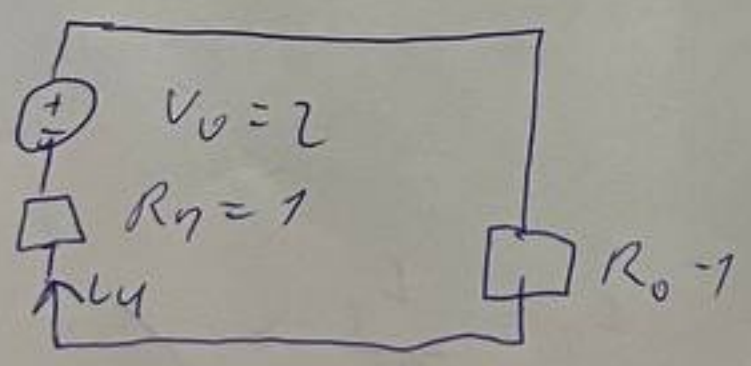




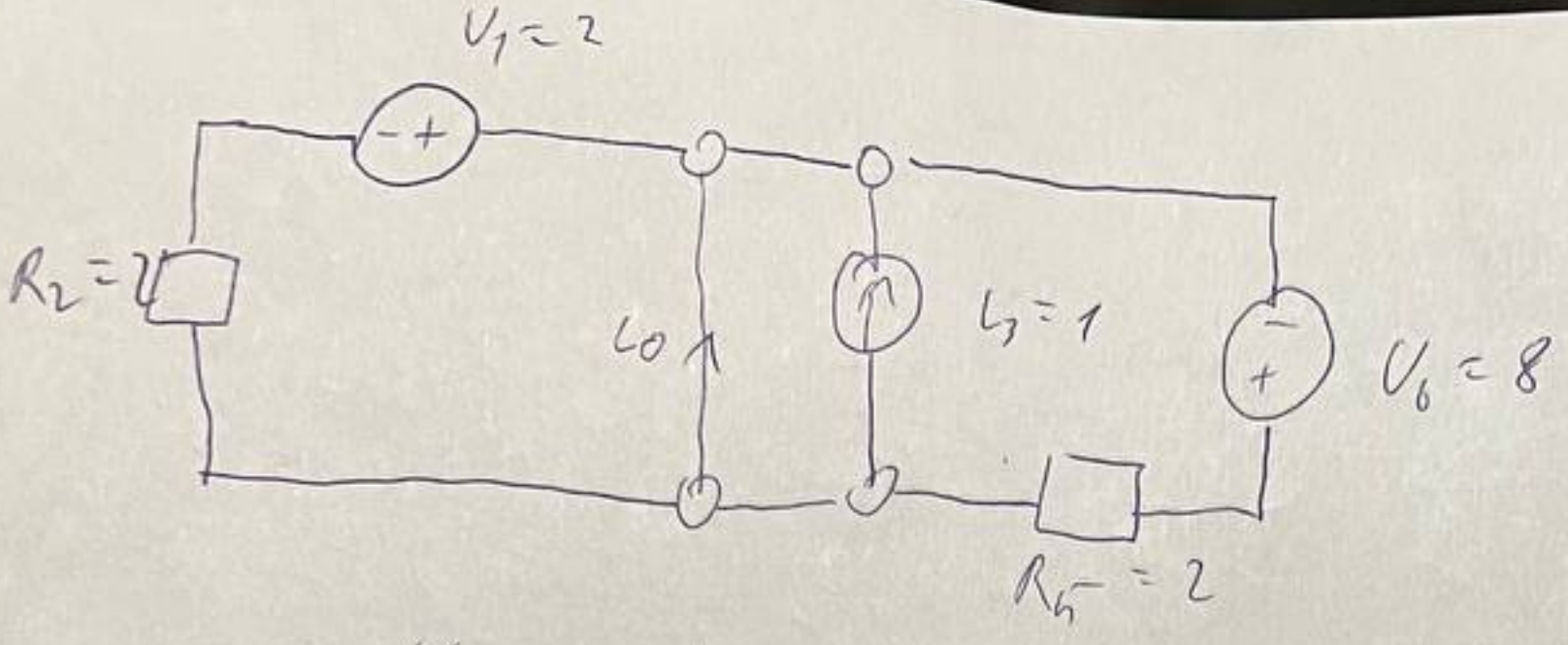
$$U_2 = \frac{L_1 R_5 R_3}{R_2 + R_5} - \frac{U_1 + U_6}{R_2 + R_5} R_2 = 1 \cdot 5 = -4$$

$$U_0 = -U_2 - U_1 = 4 - 2 = 2$$

$$R_0 = \frac{R_2 R_5}{R_2 + R_5} = 1$$

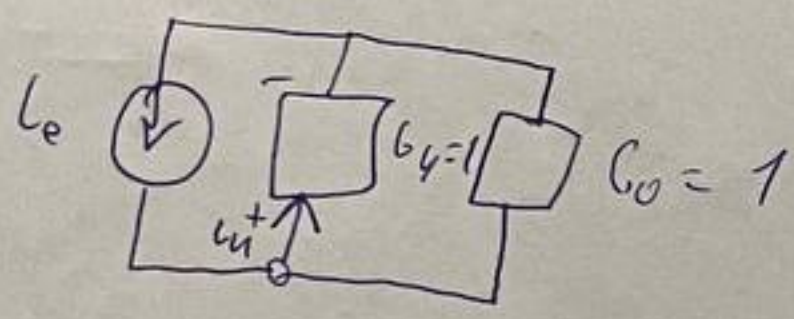


$$i_4 = \frac{U_0}{R_0 + R_4} = 1$$



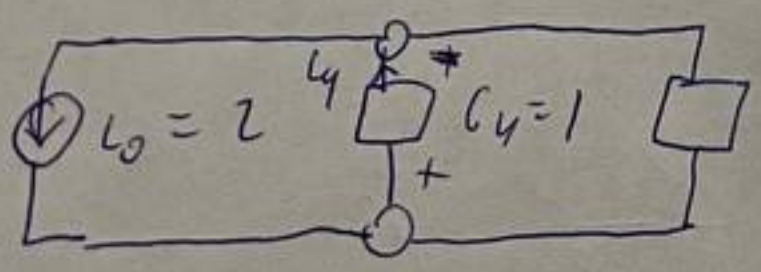
$$G_0 = \frac{U_1}{R_5} - \frac{U_1}{R_2} - G_3 = \frac{8}{2} - \frac{2}{2} - 1 = 2$$

$$G_0 = \frac{1}{R_2} + \frac{1}{R_5} = 1 \qquad G_4 = \frac{1}{R_4} = 1$$



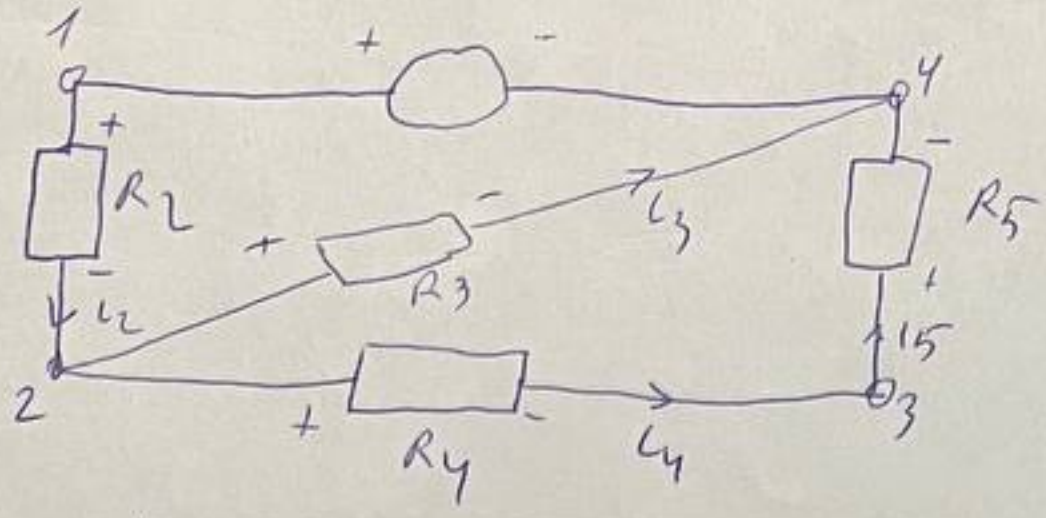
$$U_4 = \frac{I_0}{G_4 + G_0} = \frac{2}{1+1} = 2$$

$$I_4 = \frac{U_4}{R_4} = \frac{1}{1} = 1$$



$$U_4 = \frac{I_0}{G_0 + G_4} = \frac{2}{1+1} = 1 \qquad I_4 = \frac{U_4}{R_4} = 1$$

N 1.4.



$R_к = 4$

$I_5' = 1 \quad U_3' = I_5'(R_4 + R_5) = 8 \quad I_3' = \frac{U_3'}{R_3} = 2$

$I_2' = I_3' + I_5' = 3 \quad U_2' = I_2' R_2 = 12$

$U_1' = U_2' + U_3' = 20 \quad k = \frac{U_1}{U_1'} = \frac{120}{20} = 6$

$I_5 = k I_5' = 6 \quad U_3 = k U_3' = 6 \cdot 8 = 48$

$R_{вх} = \frac{R_2 + R_3(R_4 + R_5)}{R_3 + R_4 + R_5} = 4 + \frac{4 \cdot 8}{12} = 6\frac{2}{3} = \frac{20}{3}$

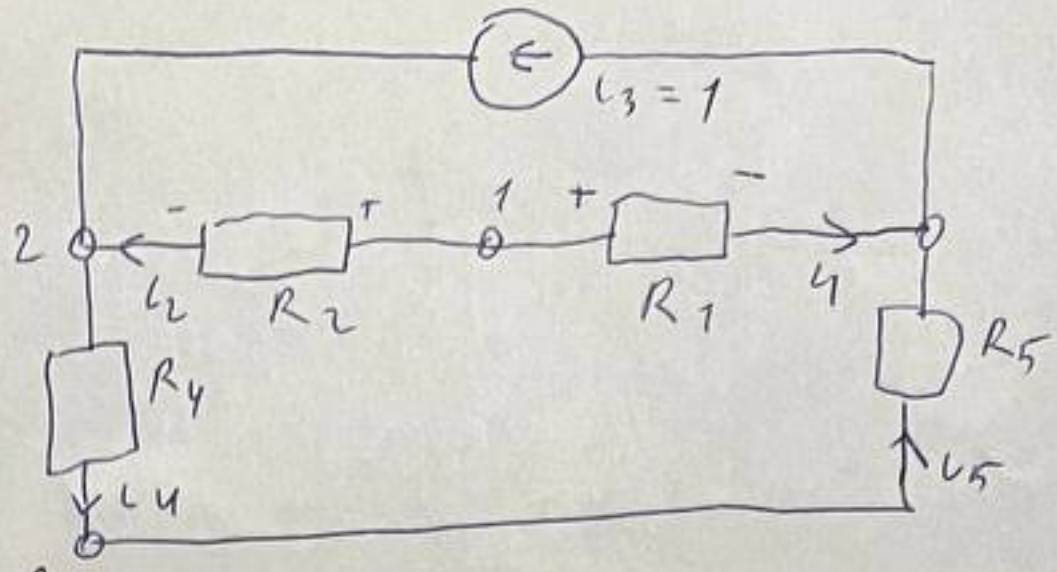
$G_{вх} = \frac{1}{R_{вх}} = \frac{3}{20}$

$G_{5-1} = \frac{I_5}{U} = \frac{I_5'}{U_1'} = \frac{1}{20} = 0{,}05$

$K_{т_{3-1}} = \frac{U_3}{U_1} = \frac{U_3'}{U_1'} = \frac{8}{20} = \frac{4}{10} = 0{,}4$

N 1.2.

$R_к = 1$



$$R_{вх} = \frac{(R_1 + R_2)(R_4 + R_5)}{R_1 + R_2 + R_4 + R_5} = \frac{2 \cdot 2}{4} = 1$$

$$U = I_3 \cdot R_{вх} = 1 \cdot 1 = 1$$

$$U_1 = \frac{U R_1}{R_1 + R_2} = \frac{1 \cdot 1}{1 + 1} = \frac{1}{2}$$

$$I_1 = -I_2 = \frac{I_3 (R_4 + R_5)}{R_1 + R_2 + R_4 + R_5} = \frac{1}{2}$$

~~$I_4 = I_5$~~ =

$$I_4 = I_5 = \frac{I_3 (R_1 + R_2)}{R_1 + R_2 + R_4 + R_5} = \frac{1}{2}$$

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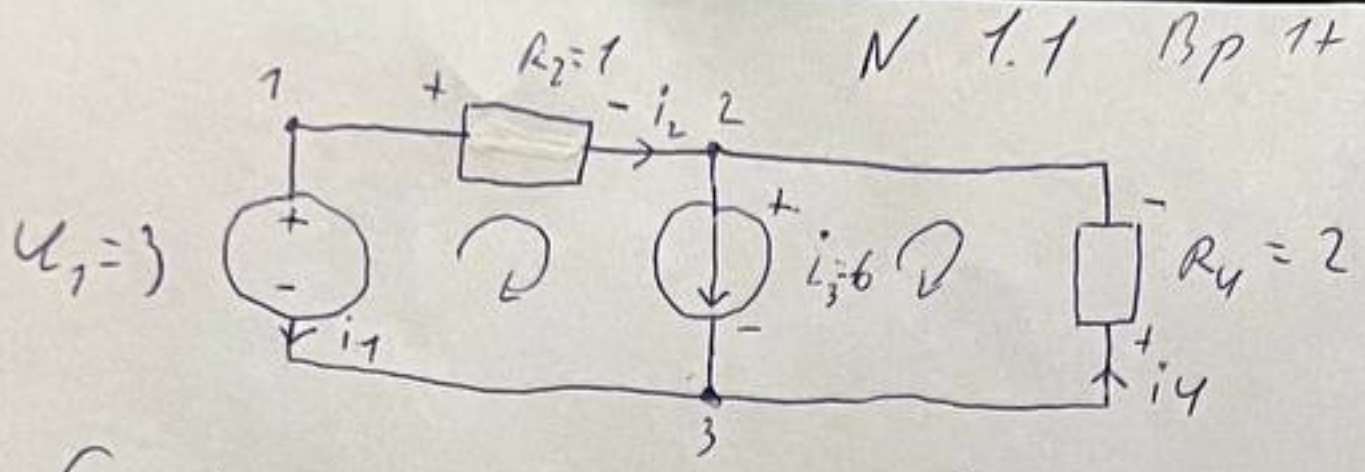
N 1.1 Вр 14



$$\begin{cases} -U_1 + U_2 + U_3 = 0 \\ I_2 + I_4 - I_3 = 0 \\ -U_3 - U_4 = 0 \end{cases} \qquad \begin{cases} -3 + i_2 + U = 0 \\ U_3 = -2 i_4 \\ I_2 + I_4 = 6 \end{cases}$$

$I_2 - 2 I_4 = 3$

$I_2 + I_4 = 6$

$-3 I_4 = -3$

$I_4 = 1$

$I_2 = 3 + 2 I_4 = 5$ $\quad I_1 = -I_2 = -5$

$U_2 = i_2 R_2 = 5$ $\quad U_4 = I_4 R_4 = 2$ $\quad U_3 = -U_4 = -2$

$P_1 = U_1 I_1 = 3 \cdot -5 = -15$

$P_2 = U_2 I_2 = 5 \cdot 5 = 25$

$P_3 = U_3 I_3 = -2 \cdot 6 = -12$

$P_4 = U_4 I_4 = 2 \cdot 1 = 2$