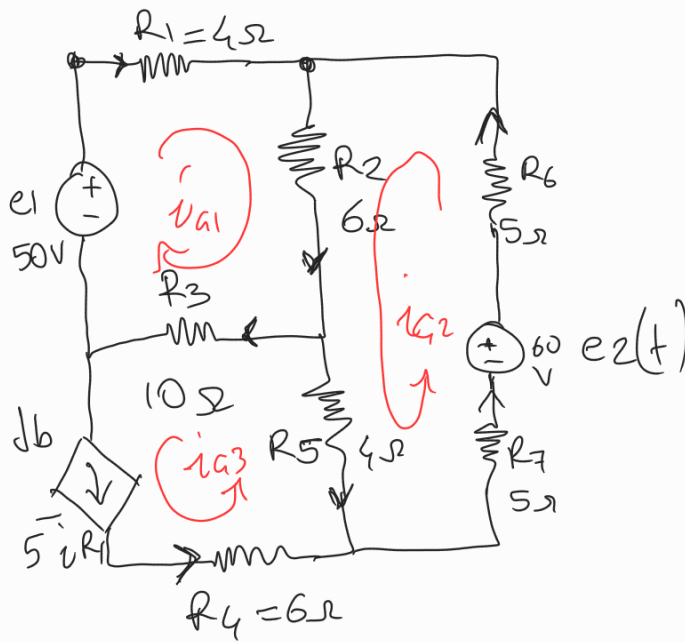




1. Adım

$$i_{G1} = ?$$

$$i_{G2} = ?$$

$$i_{G3} = j6 = 5i_{R1}$$

2. Adım

$$1 \quad V_{R1} + V_{R2} + V_{R3} - e_1(t) = 0$$

$$2 \quad V_{R2} + V_{R5} + V_{R7} - e_2(t) + V_{R6} = 0$$

3. Adım

$$1 \quad I_{R1} \cdot R_1 + I_{R2} \cdot R_2 + I_{R3} \cdot R_3 - e_1(t) = 0$$

$$2 \quad I_{R2} \cdot R_2 + I_{R5} \cdot R_5 + I_{R7} \cdot R_7 - e_2(t) + I_{R6} \cdot R_6 = 0$$

4. Adım

$$I_{R1} = i_{G1} \quad I_{R5} = i_{G2} - j6$$

$$I_{R2} = i_{G1} + i_{G2} \quad I_{R6} = i_{G2}$$

$$I_{R3} = i_{G1} + j6 \quad I_{R7} = i_{G2}$$

$$I_{R4} = i_{G3}$$

5. Adm

$$\begin{aligned} 1 \quad & i_{G1} R_1 + (i_{G1} + i_{G2}) R_2 + (i_{G1} + j_b) R_3 - e_1(t) = 0 \\ 2 \quad & (i_{G1} + i_{G2}) R_2 + (i_{G2} - j_b) R_5 + i_{G2} R_7 - e_2(t) + \\ & i_{G2} R_6 = 0 \end{aligned}$$

$$\boxed{R \cdot i_G + F e(t) + S j(t) = 0}$$

$$\begin{bmatrix} R_1 + R_2 + R_3 & R_2 \\ R_2 & R_2 + R_5 + R_7 + R_6 \end{bmatrix} \begin{bmatrix} i_{G1} \\ i_{G2} \end{bmatrix} + \begin{bmatrix} -1 \\ 0 \end{bmatrix} e_1(t) + \begin{bmatrix} 0 \\ -1 \end{bmatrix} e_2(t) +$$

$$\begin{bmatrix} R_3 \\ -R_5 \end{bmatrix} j_b(t) = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$$