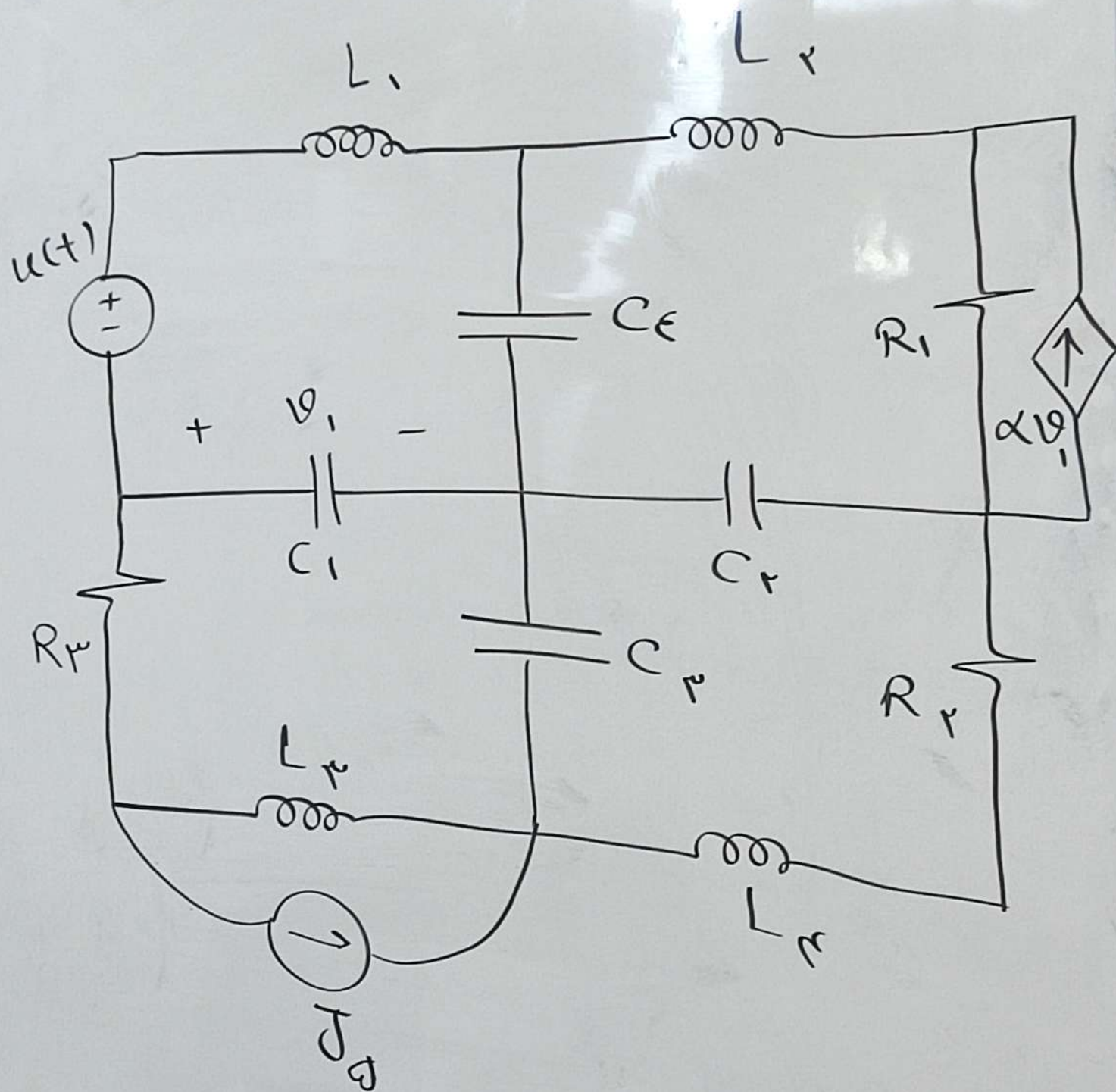
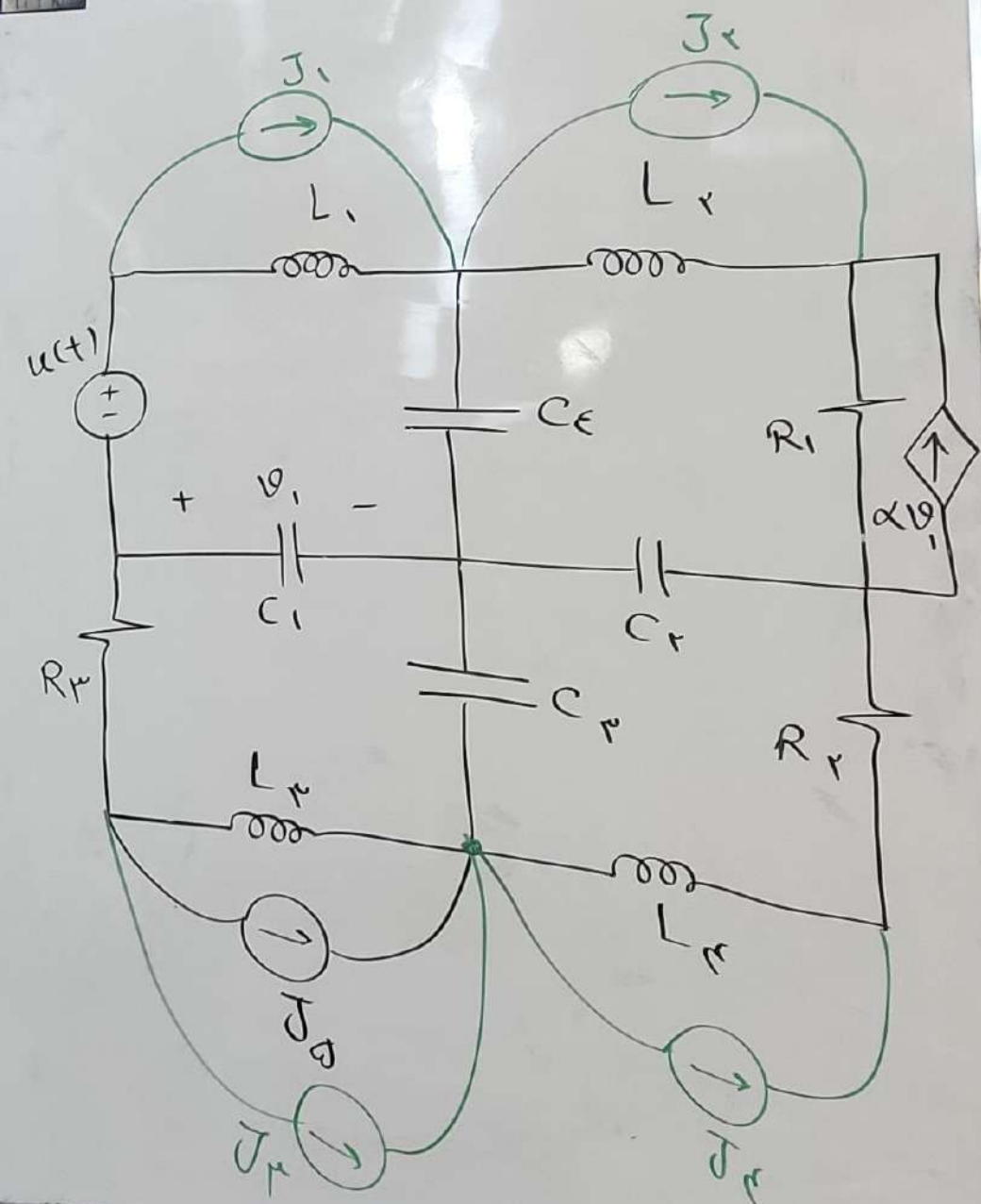
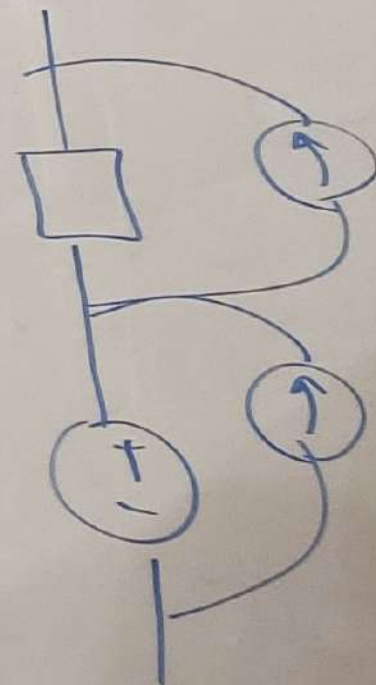
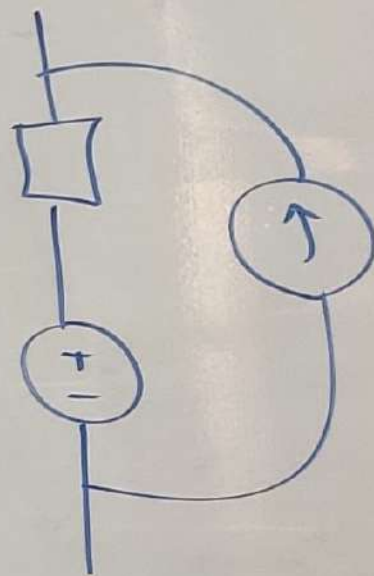


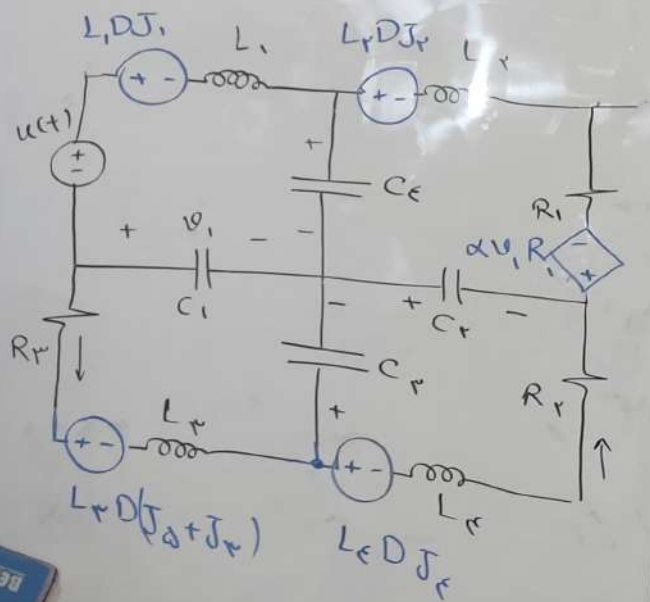




$$L = b - n_t + 1$$

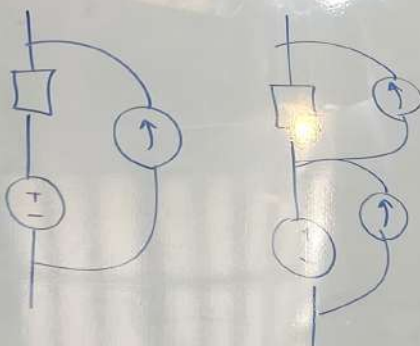
$$12 - 9 + 1 = 4$$



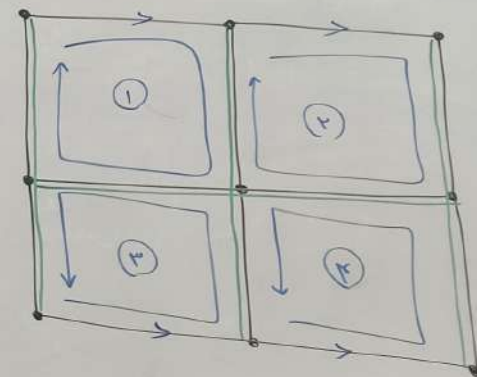


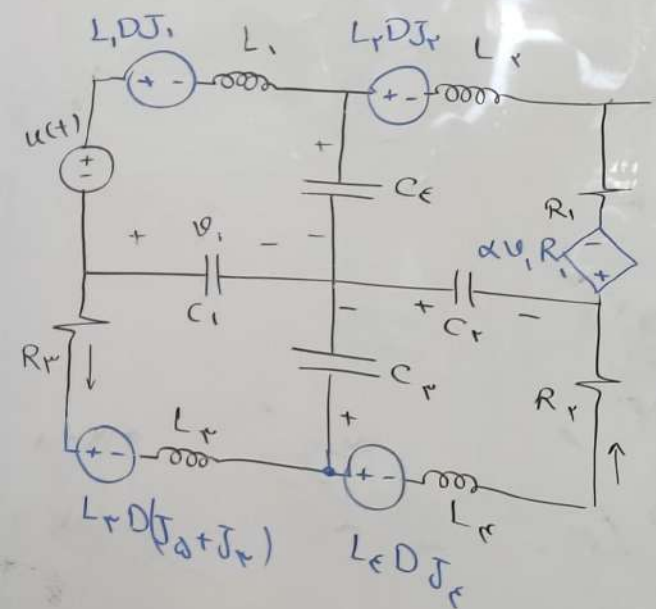
$$L = b - n_t + 1$$

$$12 - 9 + 1 = 4$$



$$n_t - 1 = 9 - 1 = 8$$



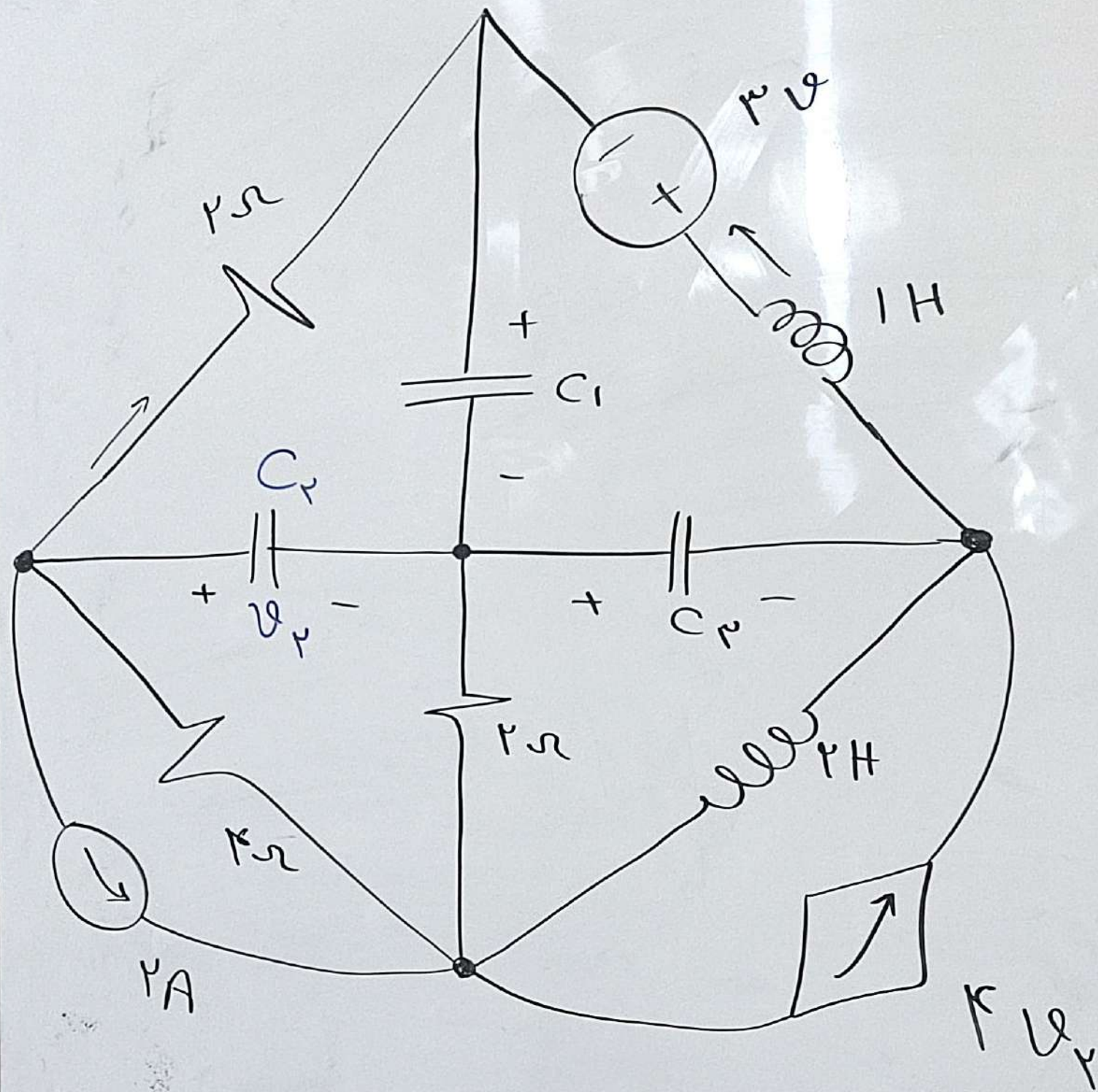


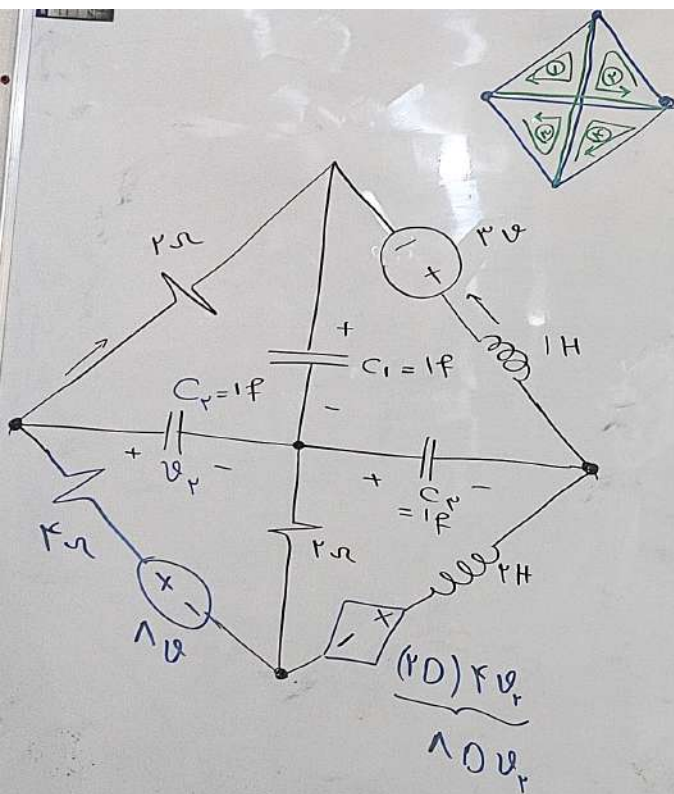
$$\underline{Z} \cdot \underline{i} = \underline{e}_s$$

$$\underline{v}_1 = \frac{1}{C_1 D} (i_1 + i_r)$$

$$\begin{bmatrix} Z_{L_{11}} & Z_{L_{1r}} & Z_{L_{1e}} \\ Z_{L_{r1}} & Z_{L_{rr}} & Z_{L_{re}} \\ Z_{L_{e1}} & Z_{L_{er}} & Z_{L_{ee}} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \\ i_e \end{bmatrix} = \begin{bmatrix} -L_1 D J_1 + u(t) \\ -L_r D J_r + \alpha V_1 R_1 \\ -L_e D(J_a + J_r) \end{bmatrix}$$

$$\begin{bmatrix} L_1 D + \frac{1}{C_e D} + \frac{1}{C_1 D} & -\frac{1}{C_e D} & \frac{1}{C_1 D} \\ -\frac{1}{C_e D} & L_r D + R_1 + \frac{1}{C_r D} + \frac{1}{C_e D} & 0 \\ \frac{1}{C_1 D} & 0 & R_r + \frac{1}{C_1 D} + \frac{1}{C_r D} + L_r D \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \\ i_e \end{bmatrix} = \begin{bmatrix} -L_1 D J_1 + u(t) \\ -L_r D J_r + \alpha V_1 R_1 \\ -L_e D(J_a + J_r) \end{bmatrix}$$





$$Z_i i = e_s$$

$$\begin{bmatrix} Z_{L11} & Z_{L1r} \\ Z_{Lr1} & Z_{Lrr} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} e_s \\ 0 \end{bmatrix}$$

$$\begin{bmatrix} r + \frac{1}{D} + \frac{1}{D} & \frac{1}{D} \\ \frac{1}{D} & D + \frac{1}{D} + \frac{1}{D} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} e_s \\ 0 \end{bmatrix}$$

$$\begin{bmatrix} Z_{Lr1} & Z_{Lrr} \\ Z_{Lr1} & Z_{Lrr} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{D} & 0 \\ \frac{1}{D} & 0 \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} Z_{Lr1} & Z_{Lrr} \\ Z_{Lr1} & Z_{Lrr} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{D} & 0 \\ \frac{1}{D} & 0 \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} Z_{Lr1} & Z_{Lrr} \\ Z_{Lr1} & Z_{Lrr} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{D} & 0 \\ \frac{1}{D} & 0 \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$v_r = \frac{1}{D} (i_1 + i_r)$$

$$\begin{bmatrix} Z_{L1r} & Z_{L1e} \\ Z_{Lrr} & Z_{Lre} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{D} & 0 \\ 0 & \frac{1}{D} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} Z_{Lrr} & Z_{Lre} \\ Z_{Lrr} & Z_{Lre} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} r + \frac{1}{D} + r & r \\ r & r + \frac{1}{D} + r \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} Z_{Lrr} & Z_{Lre} \\ Z_{Lrr} & Z_{Lre} \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$

$$\begin{bmatrix} r + \frac{1}{D} + r & r \\ r & r + \frac{1}{D} + r \end{bmatrix} \begin{bmatrix} i_1 \\ i_r \end{bmatrix} = \begin{bmatrix} 0 \\ -\lambda \end{bmatrix}$$