Метод законов Кирхгофа

$ORIGIN := 1 \qquad j := \sqrt{-1}$

$Z1 := 12\text{j} \quad Z2 := 56 + 33\text{j} \quad Z3 := 81 - 52\text{j} \quad Z4 := 79 \quad Z5 := 39 - 21\text{j} \quad Z6 := 43 - 26\text{j}$

$E6 := 11 \cdot e^{j \cdot 246°} = -4.474 - 10.049\text{j}$

$$A := \begin{bmatrix} 1 & -1 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & -1 & -1 & 1 \\ -1 & 0 & -1 & 1 & 0 & 0 \\ -Z1 & -Z2 & Z3 & 0 & 0 & 0 \\ 0 & 0 & -Z3 & -Z4 & 0 & -Z6 \\ Z1 & 0 & 0 & Z4 & -Z5 & 0 \end{bmatrix} \qquad B := \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ -E6 \\ 0 \end{bmatrix}$$

$$A = \begin{bmatrix} 1 & -1 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & -1 & -1 & 1 \\ -1 & 0 & -1 & 1 & 0 & 0 \\ -12\text{j} & -56 - 33\text{j} & 81 - 52\text{j} & 0 & 0 & 0 \\ 0 & 0 & -81 + 52\text{j} & -79 & 0 & -43 + 26\text{j} \\ 12\text{j} & 0 & 0 & 79 & -39 + 21\text{j} & 0 \end{bmatrix} \qquad B = \begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 4.474 + 10.049\text{j} \\ 0 \end{bmatrix}$$

$X := A^{-1} \cdot B$

$$X = \begin{bmatrix} -0.035 + 0.014\text{j} \\ -0.034 - 0.05\text{j} \\ 0.021 - 0.041\text{j} \\ -0.014 - 0.027\text{j} \\ 0.001 - 0.064\text{j} \\ -0.013 - 0.091\text{j} \end{bmatrix}$$