$$Xl1 := 0 \qquad Xl2 := 0 \qquad Xl3 := 0 \qquad Xl4 := 31 \qquad Xl5 := 0 \qquad Xl6 := 29 \qquad Xl7 := 28 \qquad Xl8 := 36$$

$$Xc1 := 83 \qquad Xc2 := 0 \qquad Xc3 := 23 \qquad Xc4 := 0 \qquad Xc5 := 0 \qquad Xc6 := 91 \qquad Xc7 := 0 \qquad Xc8 := 19$$

$$E6м := 67 \qquad E6a := 214$$

$$Z1 := R1 + 1j\,(-Xc1) = 57 - 83j$$

$$Z2 := R2 = 14$$

$$Z34 := R3 + 1j\,(Xl4 - Xc3) = 48 + 8i$$

$$Z56 := R5 + 1j\,(Xl6 - Xc6) = 65 - 62i$$

$$Z7 := 1j\,(Xl7) = 28i$$

$$Z8 := 1j\,(Xl8 - Xc8) = 17i$$

$$E := E6м \cdot e^{1j \cdot E6a°} = -55.546 - 37.466j \qquad\qquad E = 67 \angle -146°$$

$$Z := \begin{bmatrix} Z1 \\ Z2 \\ Z34 \\ Z56 \\ Z7 \\ Z8 \end{bmatrix} \qquad RD := \mathrm{diag}(Z) \qquad E := \begin{bmatrix} 0 \\ 0 \\ 0 \\ E \\ 0 \\ 0 \end{bmatrix}$$

$$A := \begin{bmatrix} 1 & -1 & 0 & 0 & -1 & 0 \\ 0 & 0 & 1 & -1 & 1 & 0 \\ -1 & 0 & 0 & 1 & 0 & 1 \\ 0 & 1 & -1 & 0 & 0 & -1 \end{bmatrix} \qquad B := \begin{bmatrix} -1 & 0 & 0 & -1 & -1 & 0 \\ 0 & -1 & -1 & 0 & 1 & 0 \\ 1 & 1 & 0 & 0 & 0 & 1 \end{bmatrix}$$

$$G := \frac{1}{RD}$$

$$F := \left(A \cdot G \cdot A^{\mathrm{T}}\right)^{-1} \cdot \left(-A \cdot G \cdot E\right) \qquad\qquad F = \begin{bmatrix} -0.75 - 3i \\ 9.25 - 14i \\ -2.5 + 9i \\ 4 - 2i \end{bmatrix}$$

$$U := A^{\mathrm{T}} \cdot F = \begin{bmatrix} 1.75 - 12i \\ 4.75 + 1i \\ 5.25 - 12i \\ -11.75 + 23i \\ 10 - 11i \\ -6.5 + 11i \end{bmatrix} \qquad IR := G \cdot (U + E) = \begin{bmatrix} 0.108 - 0.053i \\ 0.339 + 0.071i \\ 0.066 - 0.261i \\ -0.431 - 0.634i \\ -0.393 - 0.357i \\ 0.647 + 0.382i \end{bmatrix}$$