

$$E1 := 140 \quad E2 := 170 \quad J := 2 \quad R2 := 140 \quad R3 := 70 \quad R4 := 70 \quad R5 := 70$$

$$\text{ORIGIN} := 1$$

$$A := \begin{pmatrix} 0 & 1 & 0 & -1 & -1 & 0 \\ -1 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 1 & 0 & 0 \\ 0 & R2 & 0 & 0 & R5 & 0 \\ 0 & 0 & -R3 & 0 & 0 & 1 \\ 0 & 0 & 0 & R4 & -R5 & -1 \end{pmatrix} \quad B := \begin{pmatrix} 0 \\ -J \\ J \\ E1 + E2 \\ -E1 \\ 0 \end{pmatrix}$$

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

$$I = \begin{pmatrix} 3.107 \\ 1.661 \\ 1.446 \\ 0.554 \\ 1.107 \\ -38.75 \end{pmatrix} \quad \begin{array}{l} I_1 = 3.107 \\ I_2 = 1.661 \\ I_3 = 1.446 \\ I_4 = 0.554 \\ I_5 = 1.107 \end{array}$$

$$U_j := I_6 \quad I_5 = 1.107$$

$$U_j = -38.75$$

$$P_B := E1 \cdot I_1 + E2 \cdot I_2 + J \cdot U_j$$

$$P_B = 639.821$$

$$P_{\Pi} := (I_2)^2 \cdot R2 + (I_3)^2 \cdot R3 + (I_4)^2 \cdot R4 + (I_5)^2 \cdot R5$$

$$P_{\Pi} = 639.821$$