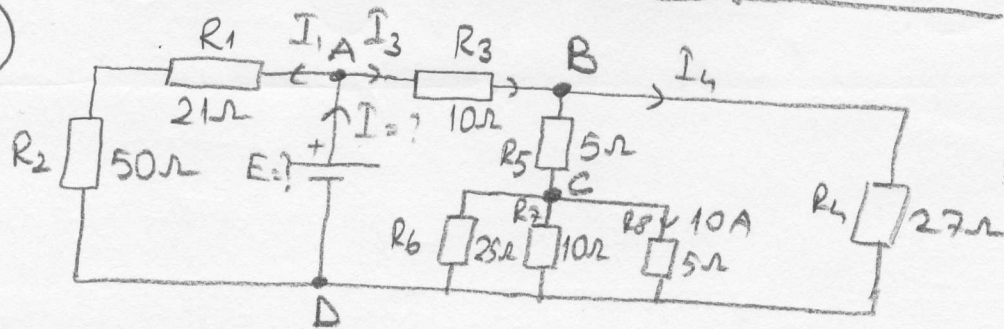


3



30

$$V_8 = R_8 \cdot I_8 = 5 \cdot 10 = 50V$$

$$V_6 = V_7 = V_8 = 50V \Rightarrow I_6 = \frac{V_6}{R_6} = \frac{50}{25} = 2A$$

$$I_7 = \frac{V_7}{R_7} = \frac{50}{10} = 5A$$

$$I_8 = 10A$$

$$I_5 = I_6 + I_7 + I_8$$

$$I_5 = 2 + 5 + 10$$

$$I_5 = 17A \quad (5)$$

$$V_5 = R_5 \cdot I_5 = 5 \cdot 17 = 85V \rightarrow V_5 = 85V \quad (5)$$

$$V_4 = V_5 + V_8 = 85 + 50 = 135V = V_{BD} \rightarrow V_4 = 135V \quad (5)$$

$$I_4 = \frac{V_4}{R_4} = \frac{135}{27} = 5A \quad I_4 = 5A \Rightarrow I_3 = I_4 + I_5 = 5 + 17$$

$$I_3 = 22A \quad (5)$$

$$V_3 = R_3 \cdot I_3 = 10 \cdot 22 = 220V$$

$$E = V_3 + V_4 = 220 + 135 \Rightarrow E = 355V \quad (5)$$

$$I_1 = \frac{E}{R_1 + R_2} = \frac{355}{21 + 50} = \frac{355}{71} \Rightarrow I_1 = 5A$$

$$I = I_1 + I_3 = 5 + 22 \Rightarrow I = 27A \quad (5)$$