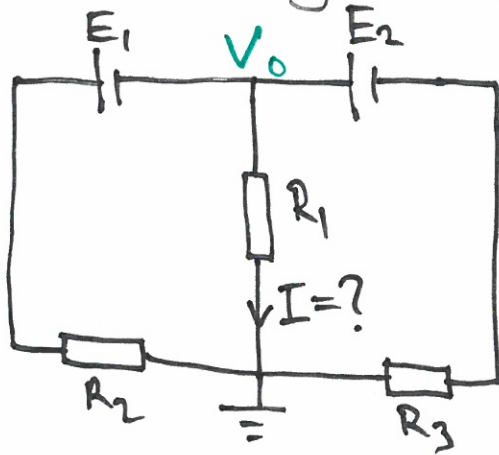


A 1.4)

Lösung med nodanalys



$$E_1 = 4.0 \text{ V}, \quad E_2 = 2.0 \text{ V}$$

$$R_1 = 10 \, \Omega$$

$$R_2 = 100 \, \Omega$$

$$R_3 = 25 \, \Omega$$

$$\frac{-V_0}{R_1} + \frac{-E_1 - V_0}{R_2} + \frac{E_2 - V_0}{R_3} = 0 \Leftrightarrow$$

$$\left(-\frac{1}{R_1} - \frac{1}{R_2} - \frac{1}{R_3} \right) \cdot V_0 = \frac{E_1}{R_2} - \frac{E_2}{R_3} \Leftrightarrow$$

$$\left(-\frac{1}{10} - \frac{1}{100} - \frac{1}{25} \right) \cdot V_0 = \frac{4}{100} - \frac{2}{25} = \frac{-4}{100} \Leftrightarrow$$

$$\Leftrightarrow V_0 = \frac{4}{15} \text{ V}$$

$$I = \frac{V_0}{R_1} = \frac{4}{1500} \approx 27 \text{ mA}$$

$$I = 27 \text{ mA}$$