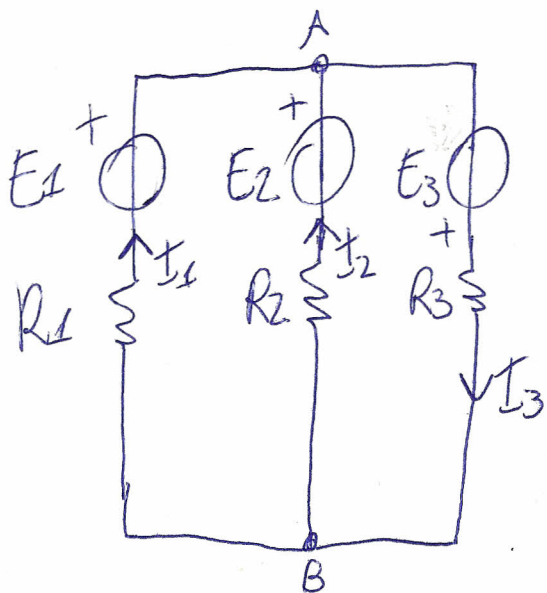


RISOLVERE LA SEGUENTE RETE ELETTRICA:



$$E_1 = 100V$$

$$E_2 = 60V$$

$$E_3 = 20V$$

$$R_1 = 2\Omega, R_2 = 10\Omega, R_3 = 4\Omega$$

UTILIZZO METODO DI MILLMAN:

$$V_{AB} = \frac{\frac{E_1}{R_1} + \frac{E_2}{R_2} - \frac{E_3}{R_3}}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}} = \frac{\frac{100}{2} + \frac{60}{10} - \frac{20}{4}}{\frac{1}{2} + \frac{1}{10} + \frac{1}{4}} = \frac{50 + 6 - 5}{\frac{10 + 2 + 5}{20}} = \frac{51}{\frac{17}{20}} = \frac{51}{0.85} = 60V$$

$$V_{AB} = E_1 - R_1 I_1 \Rightarrow -I_1 = \frac{V_{AB} - E_1}{R_1} = \frac{60 - 100}{2} = -20A \Rightarrow I_1 = 20A$$

$$V_{AB} = E_2 - R_2 I_2 \Rightarrow I_2 = \frac{V_{AB} - E_2}{R_2} = \frac{60 - 60}{10} = 0A$$

$$V_{AB} = -E_3 + R_3 I_3 \Rightarrow I_3 = \frac{V_{AB} + E_3}{R_3} = \frac{60 + 20}{4} = 20A$$