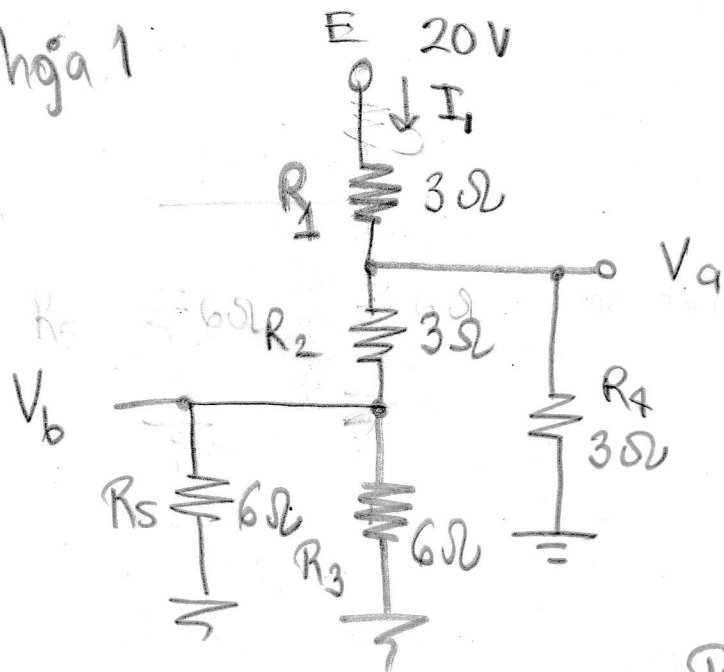


haga 1



a) Determina I_1 .

$$R_5 \parallel R_6 = 3 = R_{eq-1}$$

$$R_2 + R_{eq-1} = 6\Omega = R_{eq-2}$$

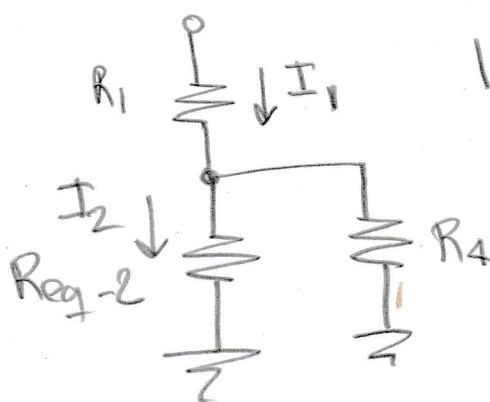
$$R_{eq-2} \parallel R_4 = \frac{6 \cdot 3}{6 + 3} = 2\Omega = R_{eq-3}$$

$$R_{Tot} = R_{eq-3} + R_1 = 5\Omega$$

$$I_1 = \frac{E}{R_{Tot}} = \frac{20V}{5\Omega} = 4A$$

b) Calcule I_2 e I_3

Para I_2 por divisor

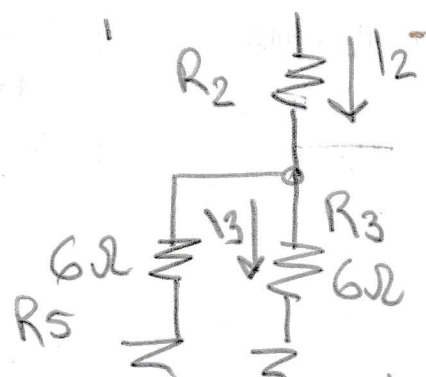


$$I_2 = \frac{R_4}{R_4 + R_{eq-2}} \cdot I_1$$

$$I_2 = \frac{3}{3 + 6} \cdot 4$$

$$I_2 = \frac{4}{3} A \sim 1.33A$$

Para I_3



Por ser iguales la corriente se divide en partes iguales

$$I_3 = \frac{2}{3} A \sim 0.66A$$

hoja 2 | c) calcule V_a y V_b

$$V_b = I_3 \cdot R_5 = I_3 \cdot R_3 \quad \text{por estar en paralelo}$$

$$V_b = \left(\frac{2}{3} \cdot 6 \right) = 4 \text{ V}$$

$$V_a = I_4 \cdot R_4 \quad \text{donde } I_4 = \frac{R_{eq-2}}{R_4 + R_{eq2}} \cdot I_1$$

$$V_a = \left(\frac{8}{3} \right) \cancel{3} = 8 \text{ V}$$

$$I_4 = \frac{6}{3+6} \cdot 4 \text{ A}$$

$$I_4 = \frac{24}{9} = \frac{8}{3} \text{ A}$$