b) Calcule I_4

- Se determina I en escalera 2

E_2 $E_1 \| E_3$

$24V$

$$I_{E_2} = \frac{E_1 \| E_3}{E_2 + (E_1 \| E_3)} \cdot I$$

$$I_{E_2} = \frac{2\|3}{6 + (2\|3)} \cdot 24A = \underline{4A}$$

Desglosando

$I_{E_2} \rightarrow R_1$ I_a
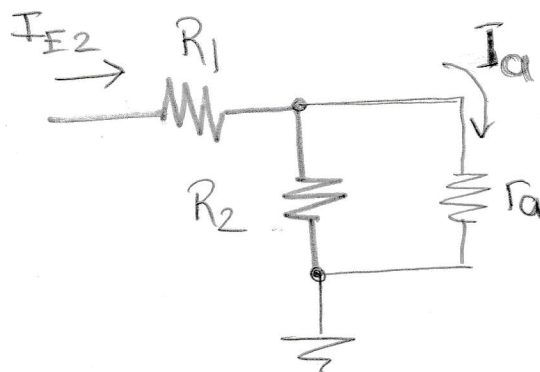
R_2 r_a

$$r_a = \left[(R_6 + R_5) \| R_4\right] + R_3$$

$$r_a = \left[(4+6) \| 10\right] + 1$$

$$r_a = 16\Omega$$

$$I_a = \frac{R_2}{R_2 + r_a} I_{E_2}$$

$$I_a = \frac{6}{6+6} \cdot 4A = \underline{2A}$$

De I_a obtenida

I_a R_3

$\downarrow I_4$
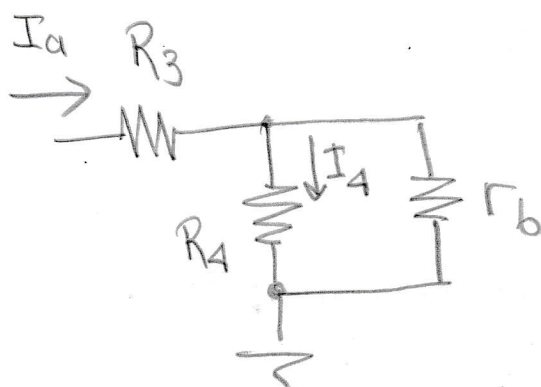
R_4 r_b

$$I_4 = \frac{r_b}{R_4 + r_b} I_a \qquad donde \; r_b = \frac{R_5 + R_6}{}$$

$$r_b = 10$$

$$I_4 = \frac{10}{10 + 10} \cdot 2A$$

$$\underline{I_4 = 1A}$$
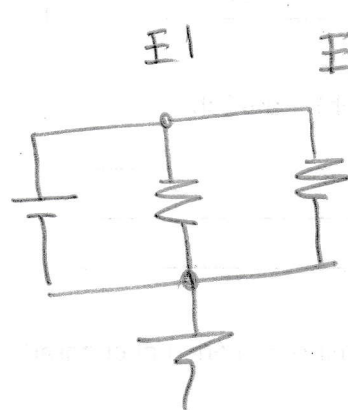
c) Encuentra I_6

$$I_6 = I_4 \quad \text{dado que}$$
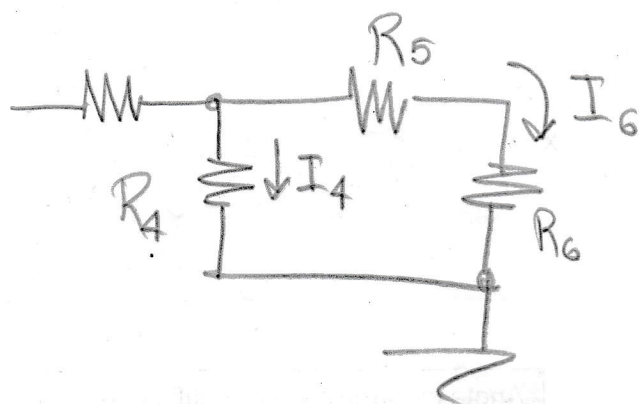
$$R_4 = (R_5 + R_6)$$

$$I_6 = 1A$$

d) Encuentra I_{10}

• se determina la corriente en la escaler 1

$$I_{E_1} = \frac{E_3 \| E_2}{E_3 \| E_2 + E_1} \cdot I$$

$$I_{E_1} = \frac{(3\|6)}{2 + (3\|6)} \cdot 24A = \frac{12A}{}$$

Como la corriente I_{10} atraviesa R_{10} entonce

$$I_{E_1} = I_{10} = 12A$$