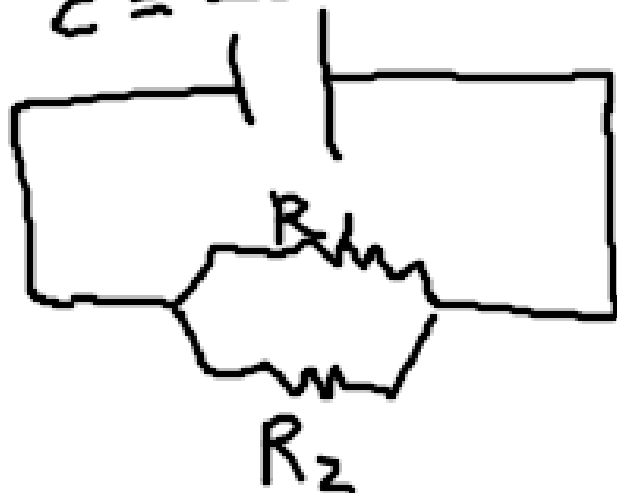


J.e.m. $\mathcal{E} = 220$



$$R_1 = 500 \Omega$$

$$R_2 = 1000 \Omega$$

$$a) I_T = \frac{V_T}{R_T}$$

$$R_T = \frac{R_1 \cdot R_2}{R_1 + R_2} = \frac{500000}{1500} = 333 \Omega$$

$$I_T = \frac{220}{333} = 0'66 \text{ A}$$

$$b) I_{R_1} = \frac{V_{R_1}}{R_1} = \frac{220}{500} = 0'44 \text{ A}$$

$$I_{R_2} = \frac{V_{R_2}}{R_2} = \frac{220}{1000} = 0'22 \text{ A}$$

$$c) V = I \cdot R_T$$

$$220 = 0'66 \cdot R_T$$

$$R_T = \frac{220}{0'66} = 333 \Omega$$

Uji 2012

$$P = \frac{W}{t} \Rightarrow$$

$$P = F \cdot v$$

$$P = I \cdot V$$

$$P = I^2 \cdot R$$

$$P = \frac{V^2}{R}$$

a) $P = 660 \text{ W}$
 $V = 220 \text{ V}$

$$P = I \cdot V$$

$$660 = I \cdot 220$$

$$I = \frac{660}{220} = 3 \text{ A}$$

b) $P = I^2 \cdot R$

$$660 = 3^2 \cdot R$$

$$R = \frac{660}{9} = 73 \Omega$$

$$0'142 \text{ € } \underbrace{\text{Kw} \cdot \text{hora}}_{\text{Energia}}$$

$$N = \frac{m \cdot K_h}{s^2}$$

$$660 \text{ W} = 0'660 \text{ Kw}$$

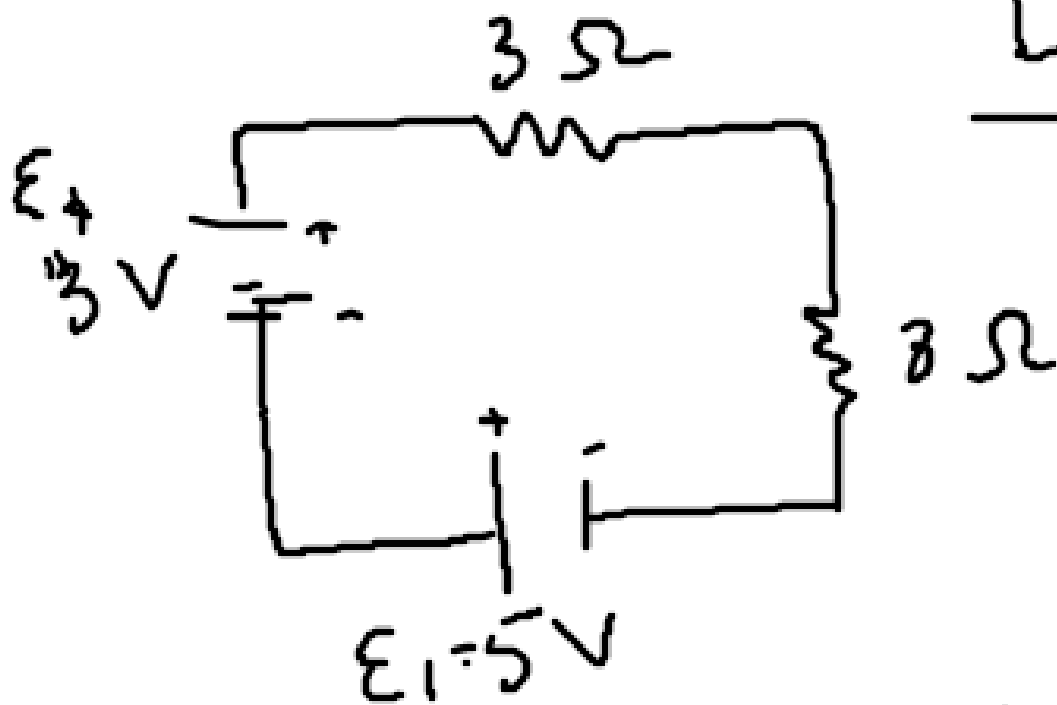
$$P = \frac{W}{t} \Rightarrow W = P \cdot t = \underbrace{0'66}_{\text{Kw}} \cdot \underbrace{0'5}_{\text{h}} = 0'33 \text{ Kw} \cdot \text{h}$$

↳ consume media hora

$$\text{€} = 0'142 \cdot 0'33 = 0'047 \text{ €}$$

↳ pago

DOS PILAS



$$V_T = I_T \cdot R \rightarrow \mathcal{E}_1 + \mathcal{E}_2 = I_T \cdot 11$$
$$I_T = \frac{8}{11} = 0,72 \text{ A}$$



$$V_T = I_T R_T$$

$$6 = I_T \cdot 3$$

$$I_T = \frac{6}{3} = 2 \text{ A}$$

Direction A-B



c) Potencia de las pilas

$$P = I \cdot v = 2 \cdot 6 = 12 \text{ W}$$

Potencia de la resistencia

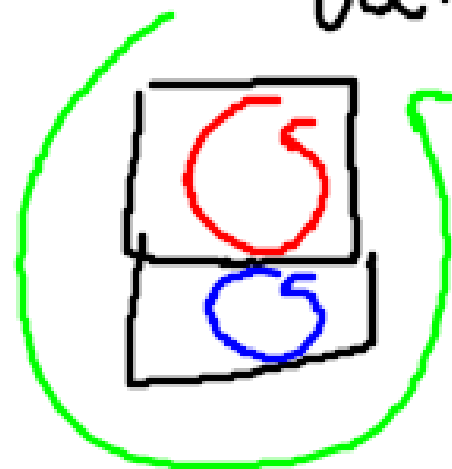
$$P = I^2 \cdot R = 2^2 \cdot 3 = 12 \text{ W}$$

Leyes de Kirchoff (P158)

• Nudo: donde confluyen intensidades



• Mallas: posibles caminos cerrados del circuito.

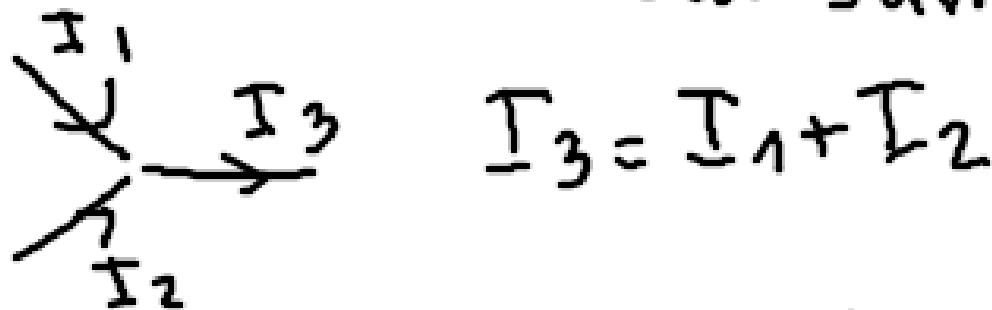


Malla 1

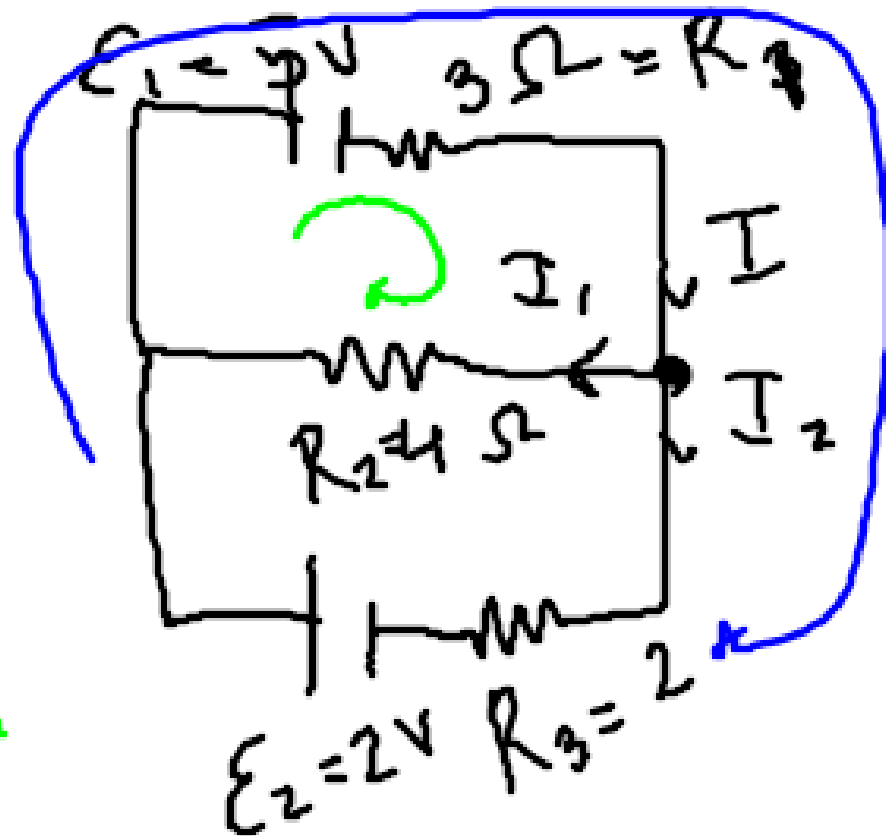
Malla 2

Malla 3

1ª Ley: en todos los nudos las intensidades suman 0



2ª Ley: en una malla la suma de las caídas de potencial son igual a las fem.



1 = Elegir nodo
y ver intensidades

$$I = I_1 + I_2$$

$$5 = 3 \cdot I + 4 I_1$$

$$\mathcal{E} = I \cdot R_1 + R_2 \cdot I_1$$

$$2 - 5 = 3 I + 2 I_2$$

$$I = I_1 + I_2$$

$$5 = 3I + 4I_1 \rightarrow 5 = 3(I_1 + I_2) + 4I_1 \rightarrow$$

$$-3 = 3I + 2I_2 \rightarrow -3 = 3(I_1 + I_2) + 2I_2$$

$$\left. \begin{array}{l} \rightarrow 5 = 7I_1 + 3I_2 \\ \rightarrow -3 = 3I_1 + 5I_2 \end{array} \right\}$$

