

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

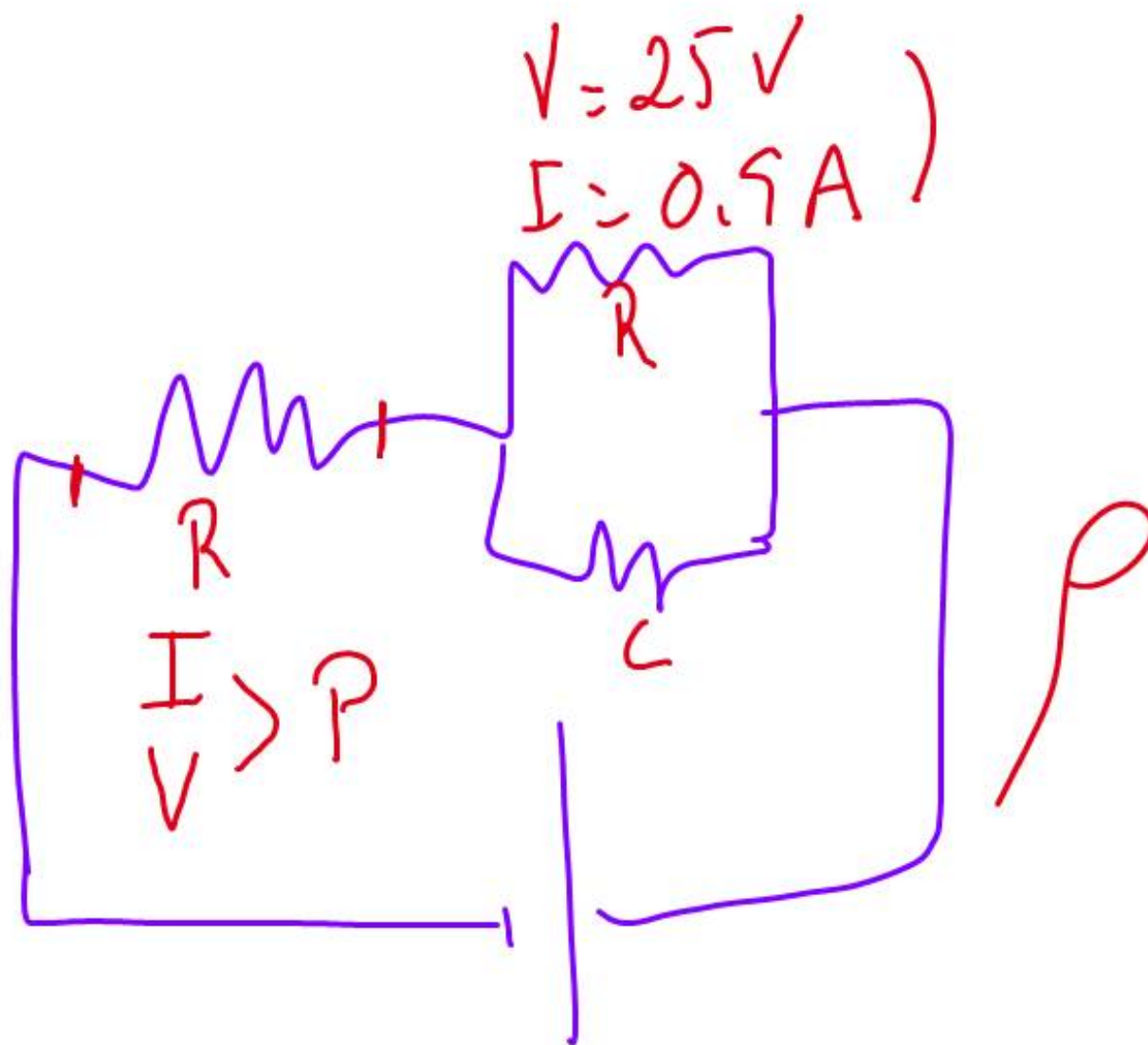
$$V = IR$$

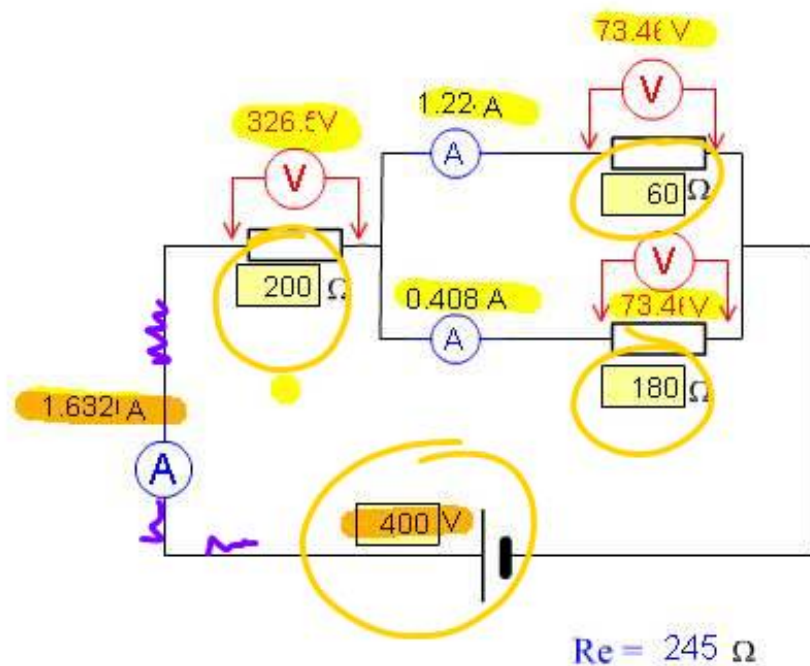
$$P = \frac{W}{t} = \frac{V \cdot I \cdot \cancel{t}}{\cancel{t}} = \frac{V \cdot I}{1} = \frac{V^2}{R} = R \cdot I^2$$

The derivation shows the relationship between power, voltage, current, and resistance. The term $V \cdot I$ is circled in red, with IR written above it. The term $R \cdot I^2$ is circled in blue.

$$\frac{1}{R} = C$$

$$R = \frac{1}{C}$$





Handwritten purple notes:

$$245\ \Omega$$

$$1.632\text{ A}$$

$$400\text{ V}$$

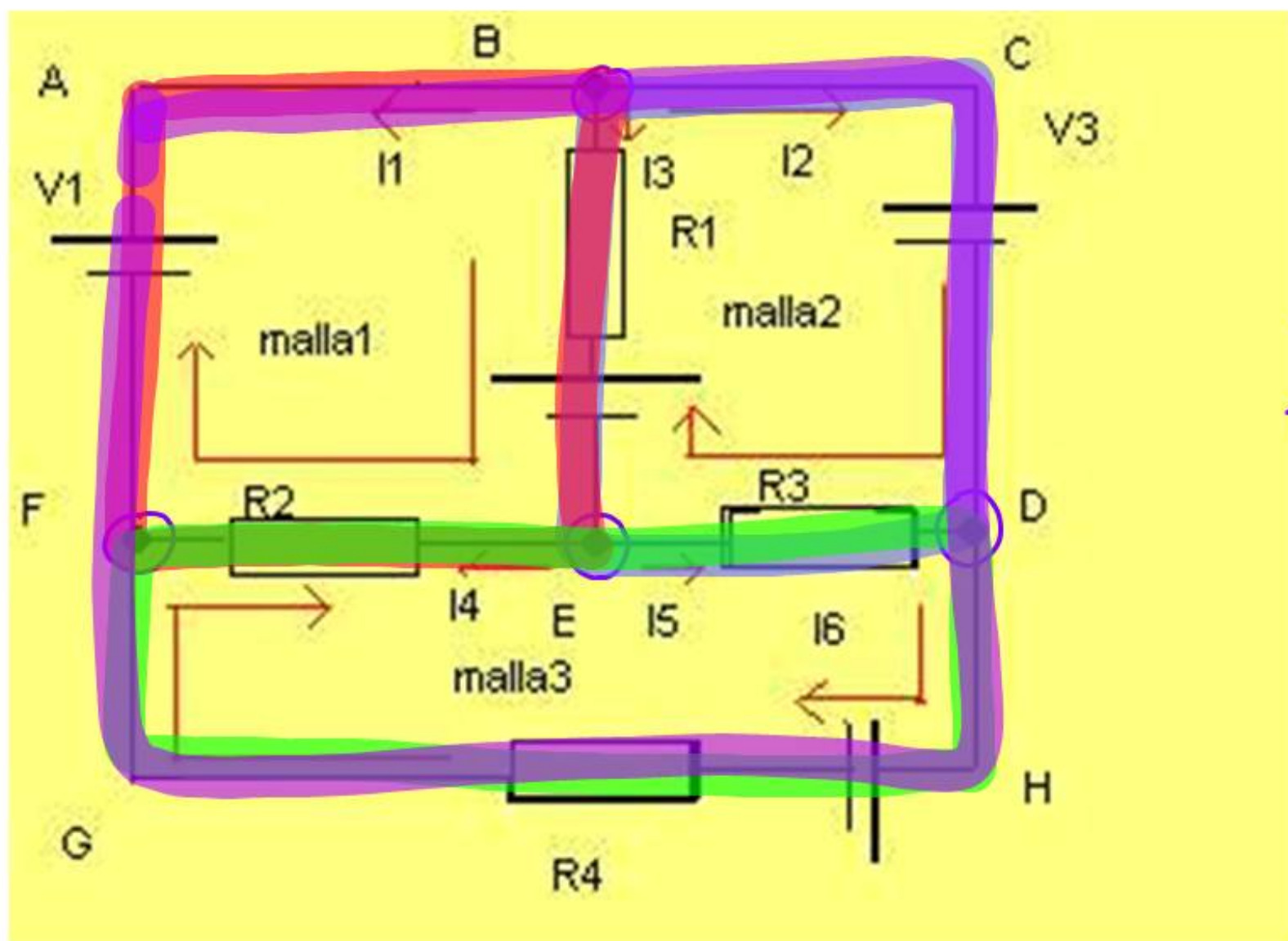
$$P = V \cdot I$$

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

1. Aquest és un circuit mixt. ($R_e = R_1 + \frac{1}{\frac{1}{R_2} + \frac{1}{R_3}}$)

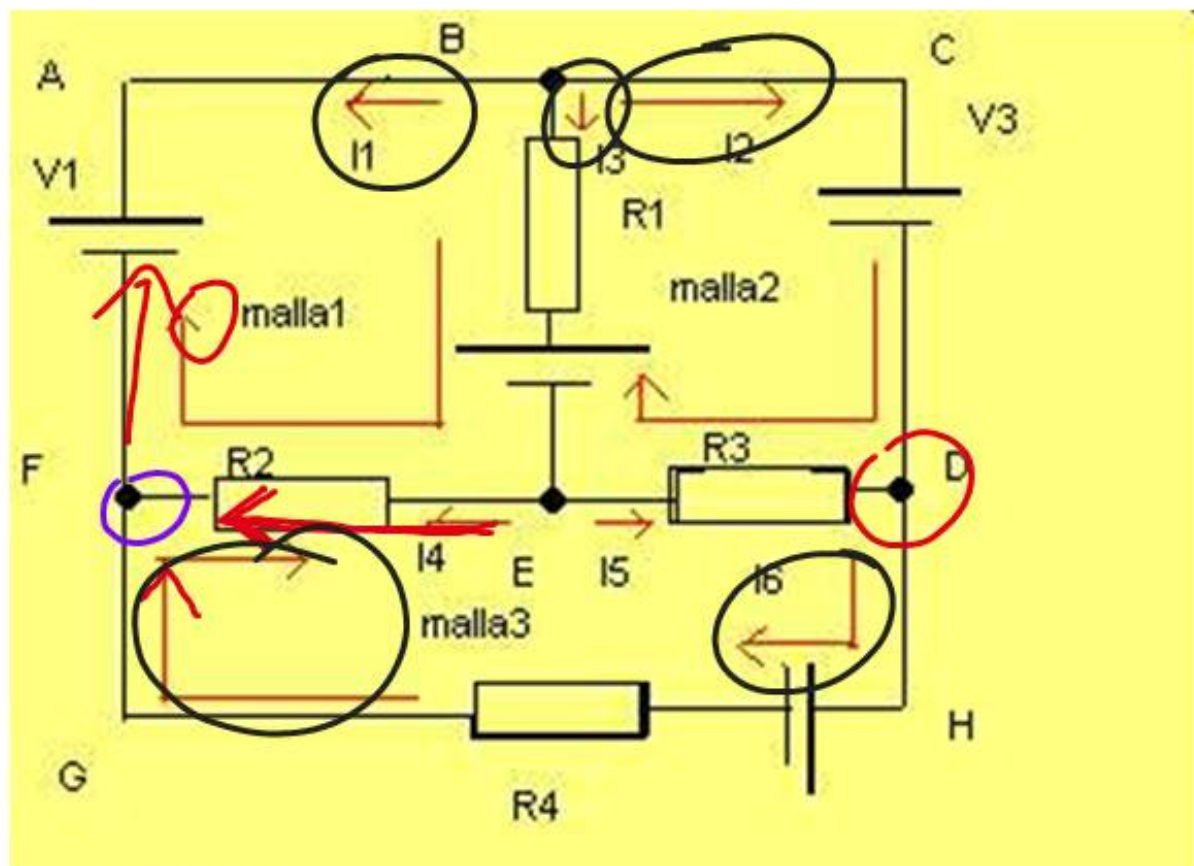
2. Càlcul de la R_e .

$$R_e = 200 + \frac{1}{\frac{1}{60} + \frac{1}{180}} = 245\ \Omega$$

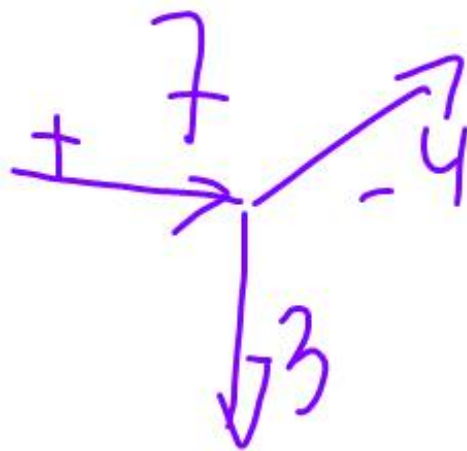


+ generators
+ resistors

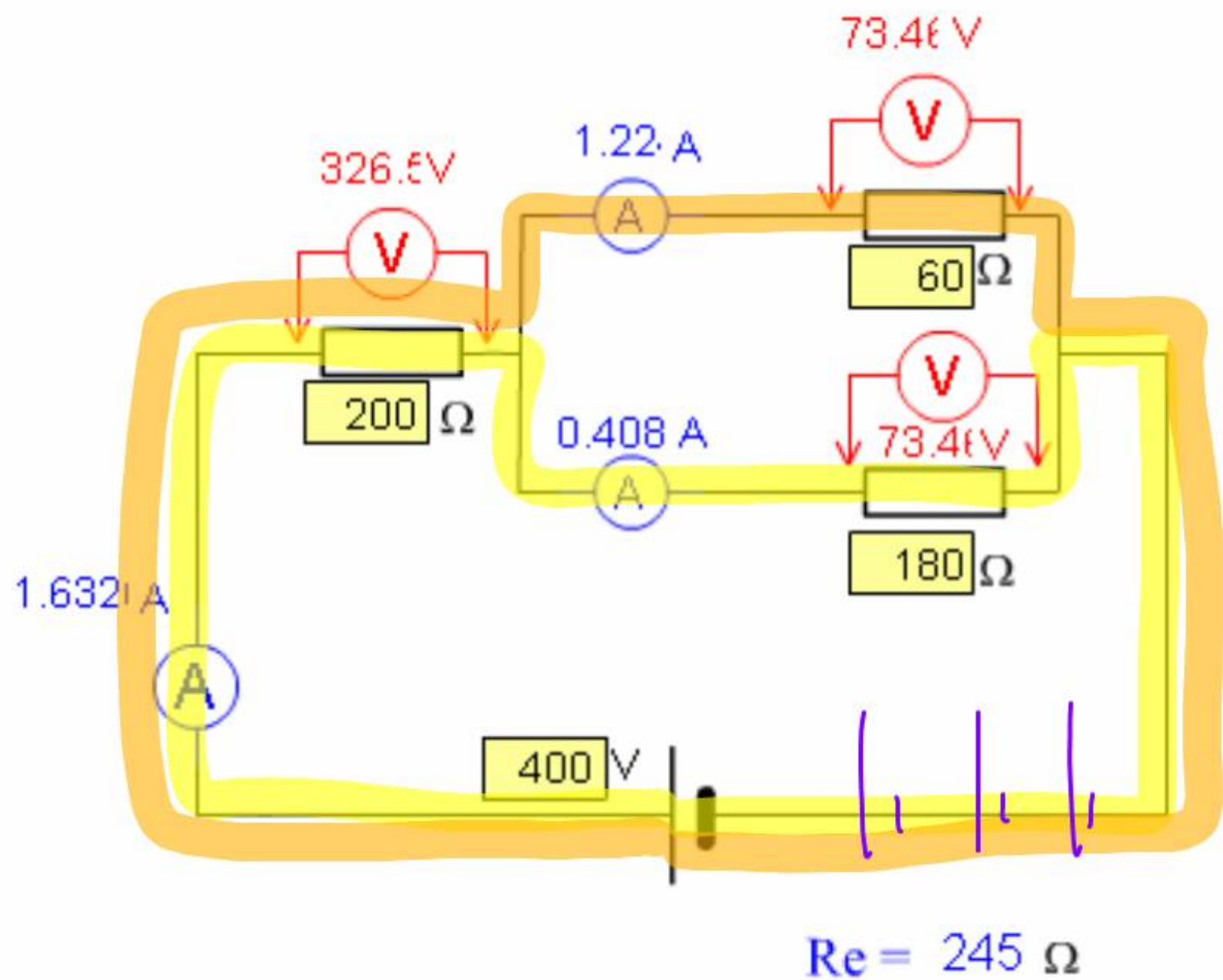


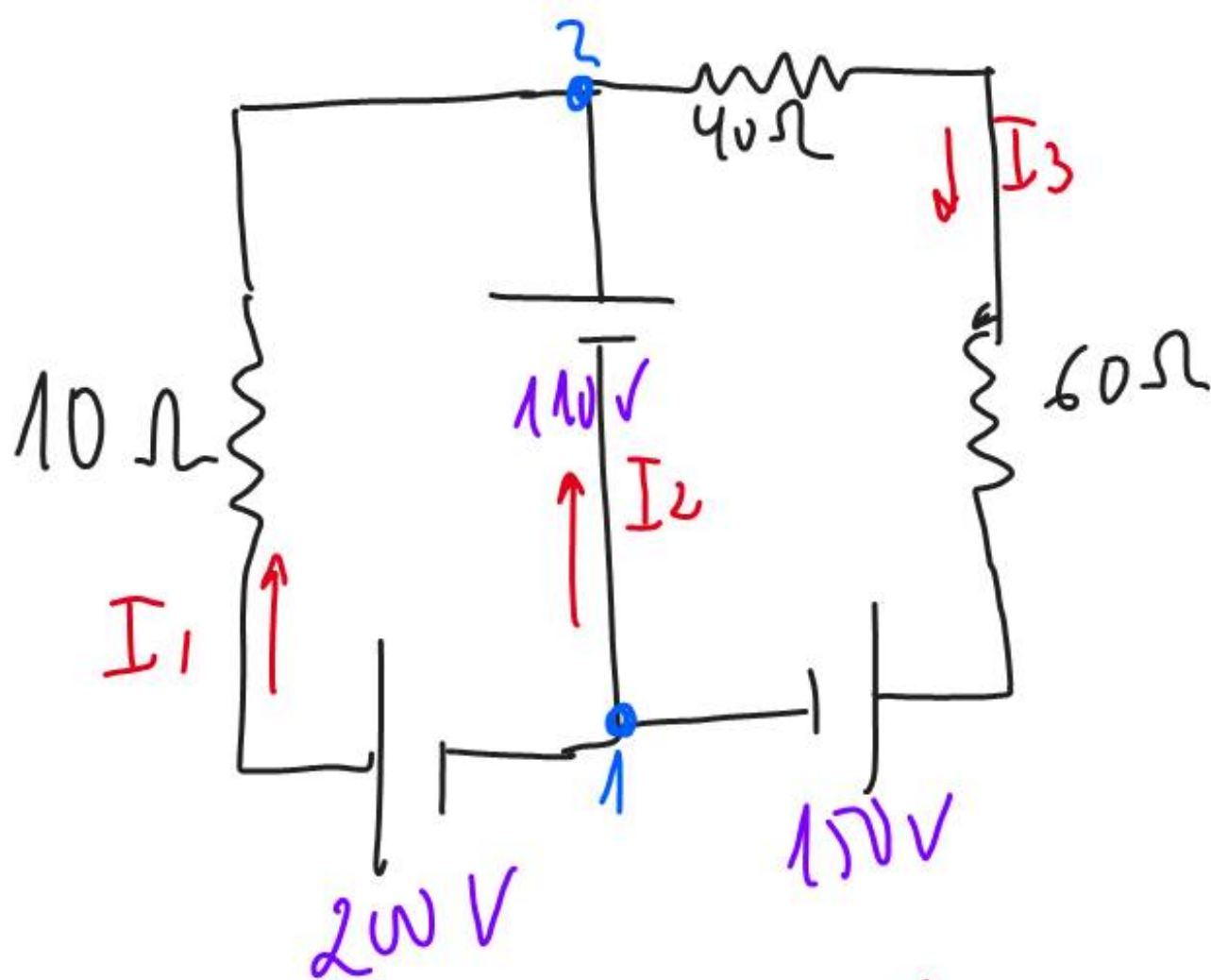


$$\begin{array}{rcl}
 \text{malla1} & I_F + I_4 - I_6 - I_1 & \sum = 0 \\
 \text{malla2} & + I_2 - I_6 + I_5 & = 0 \\
 \text{malla3} & - I_1 - I_3 - I_2 & = 0
 \end{array}$$



$$7 + (-4) + (-3) = 0$$

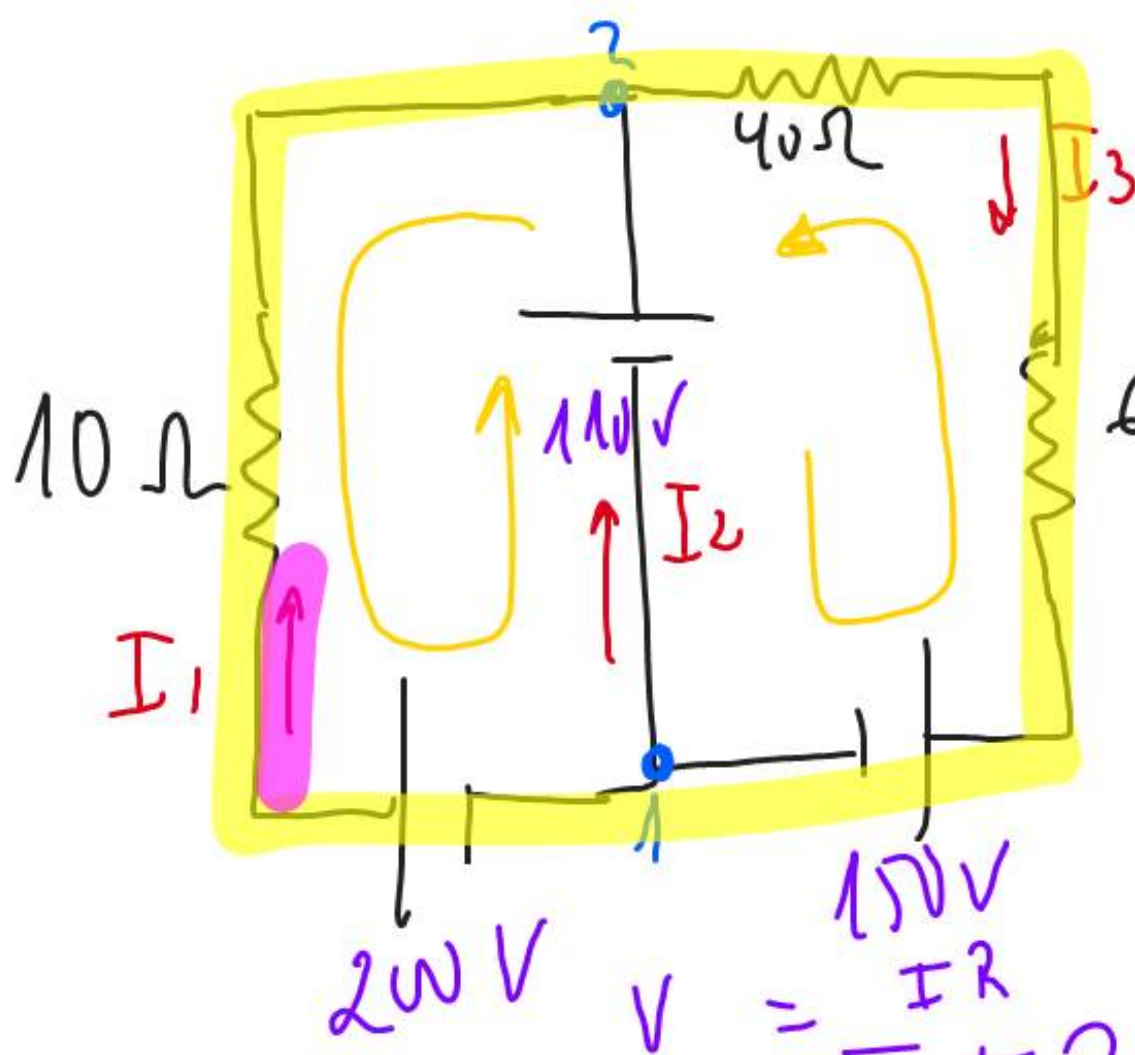




1) KES \rightarrow nodes

node 1: $-I_1 - I_2 + I_3 = 0$

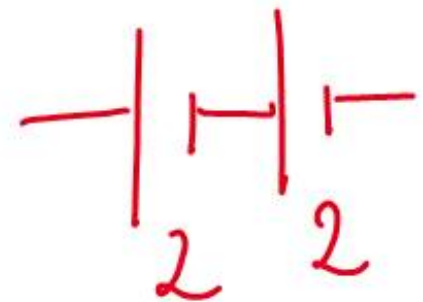
node 2: $+I_1 + I_2 - I_3 = 0$



$$I_1 = -5$$

$$I_2 = 6$$

$$I_3 = 1$$



Mallas $\sum e = \sum IR$

mallo ext: $-200 + 150 = -I_1 \cdot 10 - I_3 \cdot 40 - I_3 \cdot 60$

resol $\begin{cases} -i1 - i2 + i3 = 0 \\ i1 + i2 - i3 = 0 \\ -200 + 150 = -10i1 - 40i3 - 60i3 \end{cases} \rightarrow \{i1 = -10 \cdot i3 + 5, i2 = 11 \cdot i3 - 5, i3 = i3\}$

resol () =

I_1 I_2 I_3

