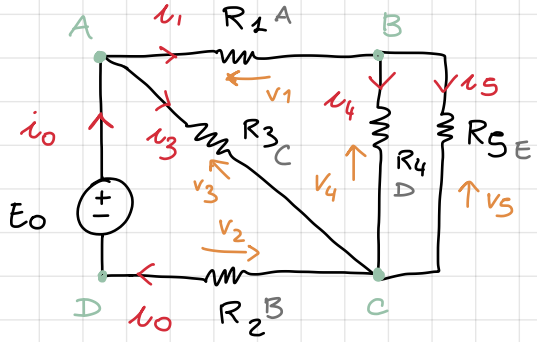
ISPEZIONE



DATI

$E_0 = 12$

A $R_1 = 6\ \Omega$

B $R_2 = 8\ \Omega$

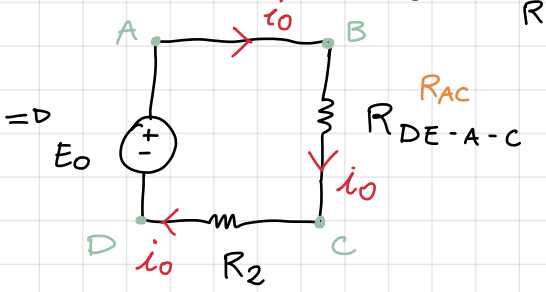
C $R_3 = 10$

D $R_4 = R_5 = 8\ \Omega$ (E)

Q Calcolare tutte le potenze assorbite dai resistori

$$R_{eq} = \{[(D \| E) + A] \| C\} + B = 13\ \Omega$$

$$\Rightarrow V = R \cdot i \rightarrow i_0 = \frac{V}{R} = \frac{E_0}{R_{eq}} = 0.923\ A \quad (i_0)$$ X



* $R_{AC} = 5\ \Omega$

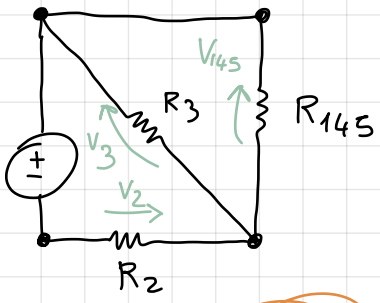
$\Rightarrow i_2 = i_0$

$$\Rightarrow P^a_{R_2} = V_2 \cdot i_2 = R_2 i_2^2 \quad (V = R \cdot i)$$

$$= 6.81\ W \quad P_{R_2}$$

$$V_{AC} = E_0 \cdot \frac{R_{AC}}{R_{AC} + R_2} = 4.62\ V \quad V_{AC}$$ Y

$$V_{AC} = V_{R3} = V_{R145}$$



$$\Rightarrow V = R \cdot i \Rightarrow i = \frac{V}{R}$$

$$\Rightarrow i_3 = \frac{V_{AC}}{R_3} = 0.462\ A \quad (i_3) \Rightarrow P^a_{R_3} = R_3 i_3^2 = 2.13\ W \quad P_{R_3}$$

NODO A:

$$LKC_A: \quad -i_0 + i_3 + i_1 = 0 \rightarrow i_1 = i_0 - i_3 = 0.461\ A \quad (i_1)$$

$$\Rightarrow P^a_{R_1} = i_1^2 \cdot R_1 = 1.275\ W \quad (P^a_{R_1})$$

$$i_4 = i_1 \cdot \frac{R_5}{R_5 + R_4} = 0.231\ A \quad (i_4) \rightarrow P^a_{R_4} = 0.427\ W$$

$$\Rightarrow LKC_B = -i_1 + i_4 + i_5 = 0 \rightarrow i_5 = i_1 - i_4 = 0.23A \rightarrow P^a_{R_5} = 0.423\ W$$