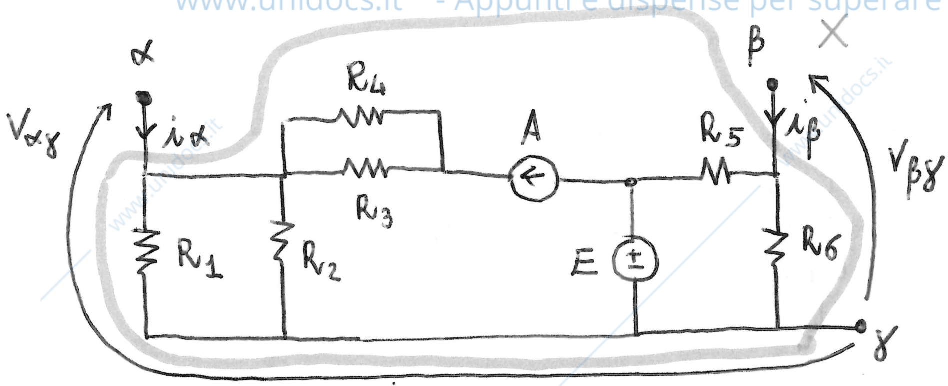
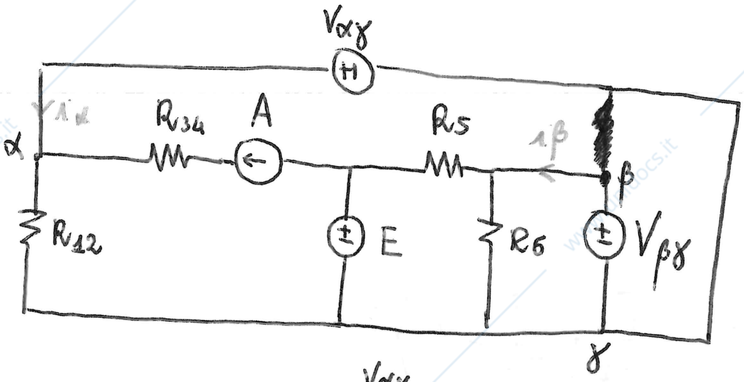
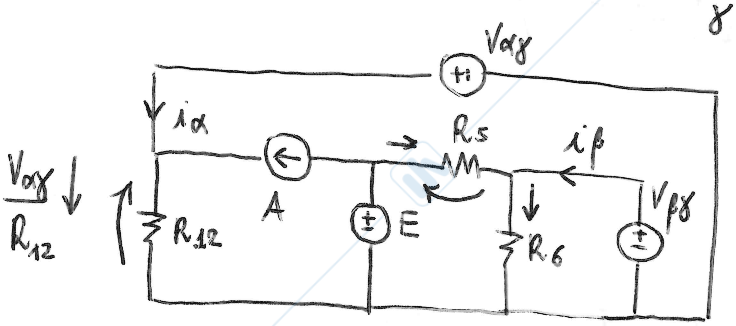


Determinare le eq^{ni} costitutive del tripolo di morsetti (α, β, γ) definito su base tensione $(V_{\alpha\gamma}, V_{\beta\gamma})$

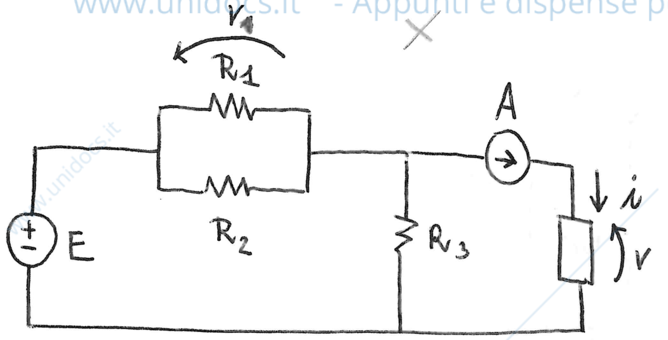


$$R_{12} = R_1 // R_2 = \frac{R_1 R_2}{R_1 + R_2}$$

$$R_{34} = R_3 // R_4$$



$$\begin{cases} i_\beta = \dfrac{V_{\beta\gamma}}{R_6} - \dfrac{V_E - V_{\beta\gamma}}{R_5} = \left(\dfrac{1}{R_5} + \dfrac{1}{R_6}\right) V_{\beta\gamma} - \dfrac{E}{R_6} \\[2ex] i_\alpha = \dfrac{V_{\alpha\gamma}}{R_{12}} - A \end{cases}$$



E costante

A costante $\neq 0$

A_0 costante $\neq 0$

$V = V_0 \, e^{\frac{i-A}{A_0}}$ eq^{ne} costitutiva del bipolo non lineare

$\cancel{V = V_0}$

$\cancel{i = A}$

$$\begin{cases} V_{R_3} = (i_{R_1} + i_{R_2} - i)R_3 = \left(\dfrac{\bar{V}}{R_1} + \dfrac{\bar{V}}{R_2} - A\right)R_3 \\ E - \bar{V} - V_{R3} = 0 \end{cases}$$

$V_{R3} = \bar{E} - \bar{V}$

$\left(\dfrac{\bar{V}}{R_1} + \dfrac{\bar{V}}{R_2} - A\right)R_3 = E - \bar{V}$ $\qquad R_3\dfrac{\bar{V}}{R_1} + \dfrac{\bar{V}R_3}{R_2} + \bar{V} = E + AR_3$

$$\bar{V} = (E + AR_3)\,\frac{R_1R_2}{R_3(R_1+R_2)+R_1R_2}$$

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