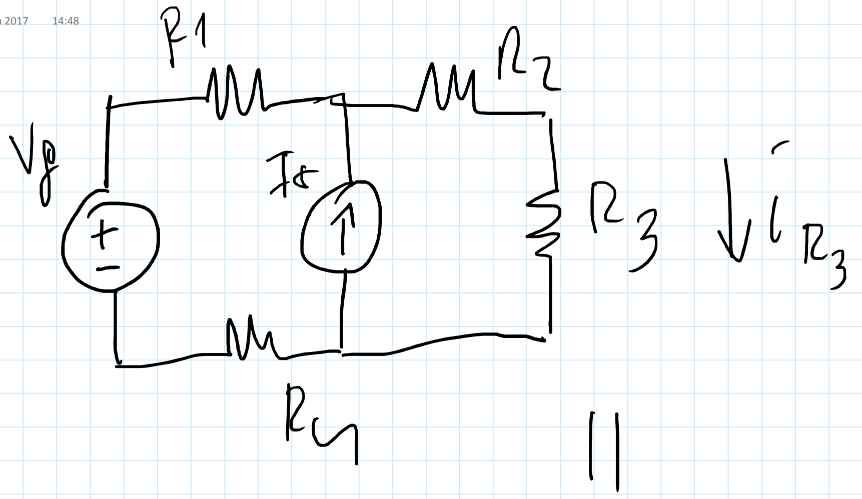
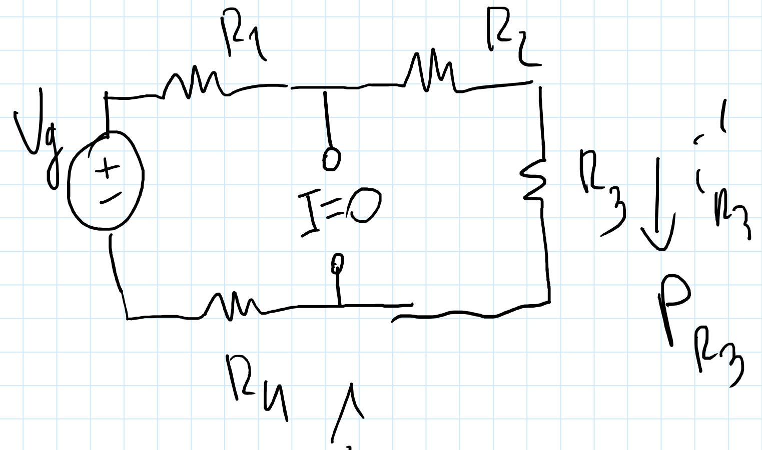
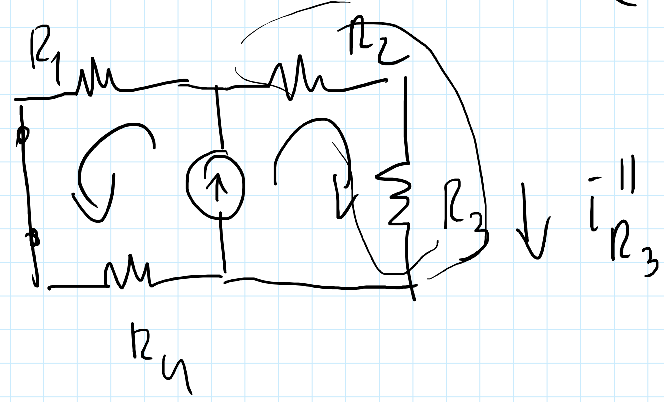


PRINCIPIO SOVRAPPOSIZIONE DEGLI EFFETTI (PSE)



V=0



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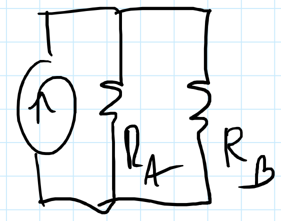


$$i_{R_A} = i_g \frac{R_B}{R_A+R_B}$$

$$i_{R_3} = i'_{R_3} + i''_{R_3}$$

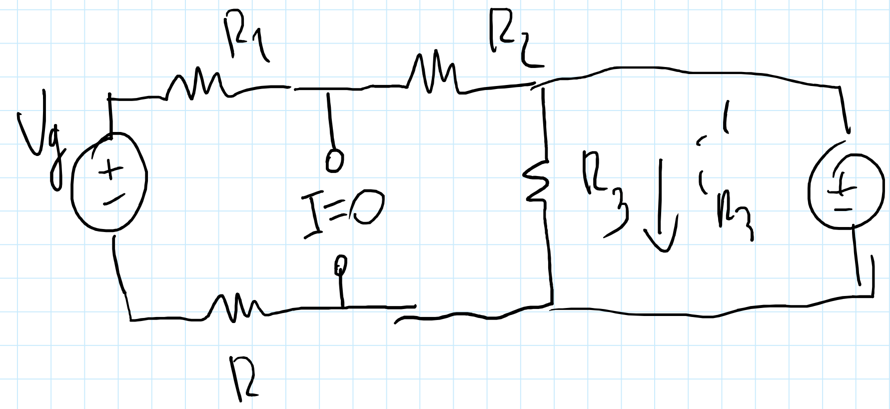
$R_A = R_2+R_3$

$R_B = R_1+R_4$

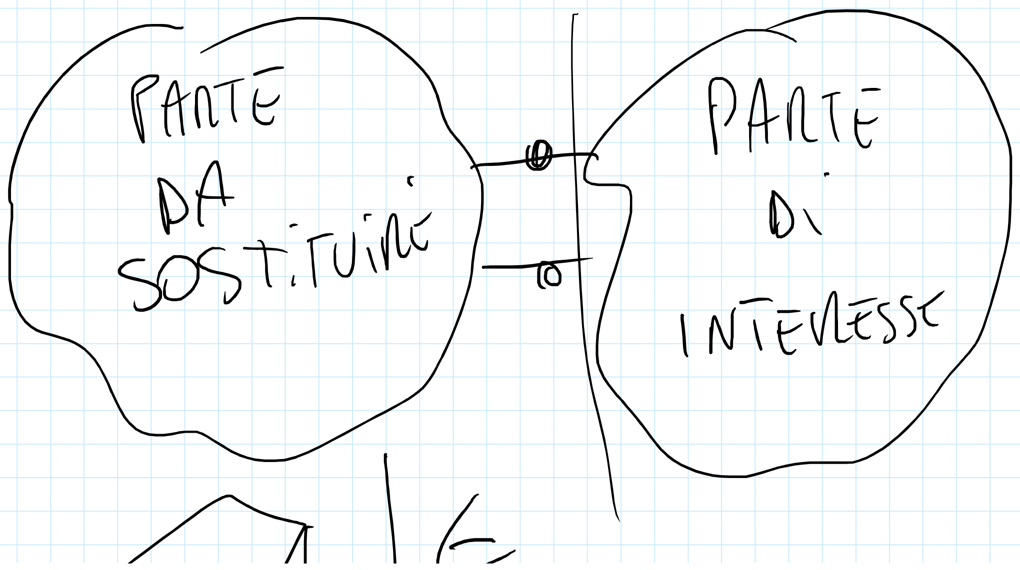
$$i'_{R_3} = \frac{V_g}{R_1+R_2+R_3+R_4} \qquad i''_{R_3} = i_g \frac{(R_1+R_4)}{\sum R}$$

$$i_{R_3} = i'_{R_3} + i''_{R_3} = \frac{V_g + i_g(R_1+R_4)}{\sum R}$$

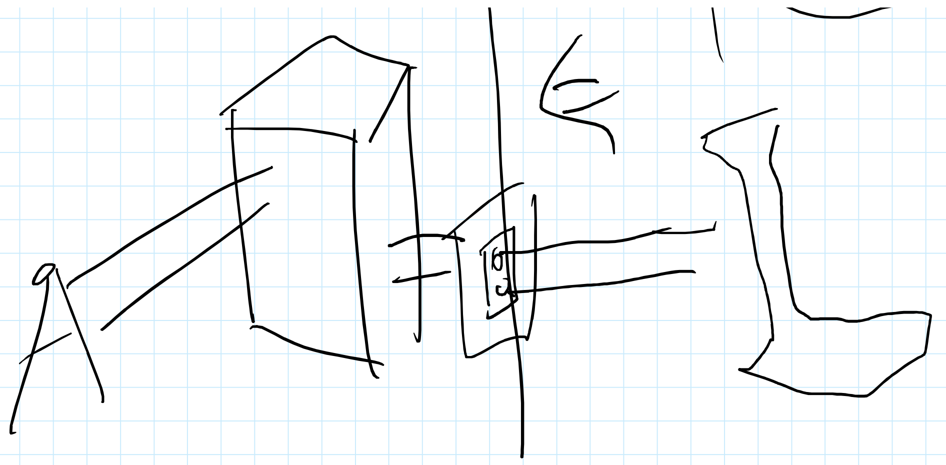
$$P_{R_3} = i_{R_3}\cdot V_{R_3} = \left(i'_{R_3}+i''_{R_3}\right)\left(V'_{R_3}+V''_{R_3}\right) \neq i'_{R_3}V'_{R_3} + i''_{R_3} V''_{R_3}$$

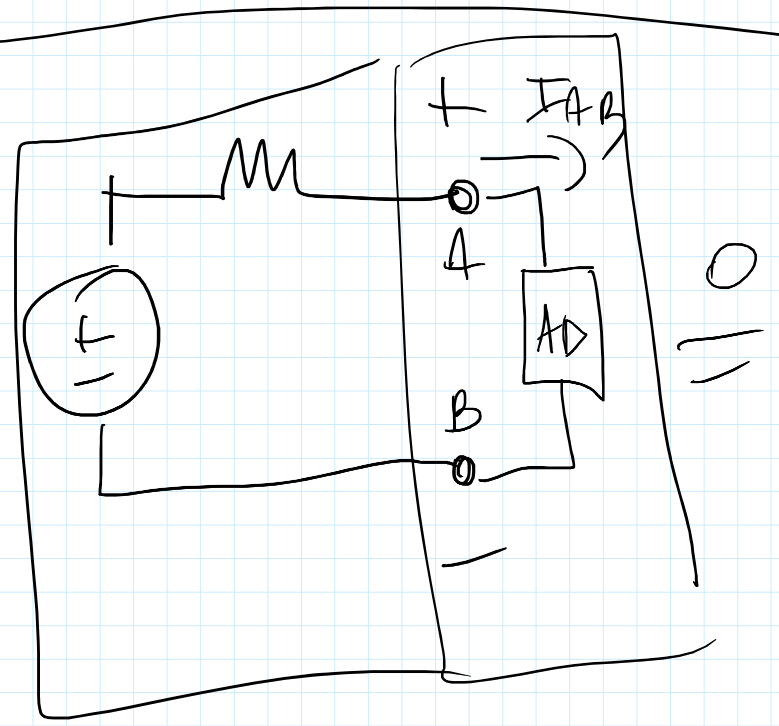


RAPPRESENTAZIONI ESTERNE

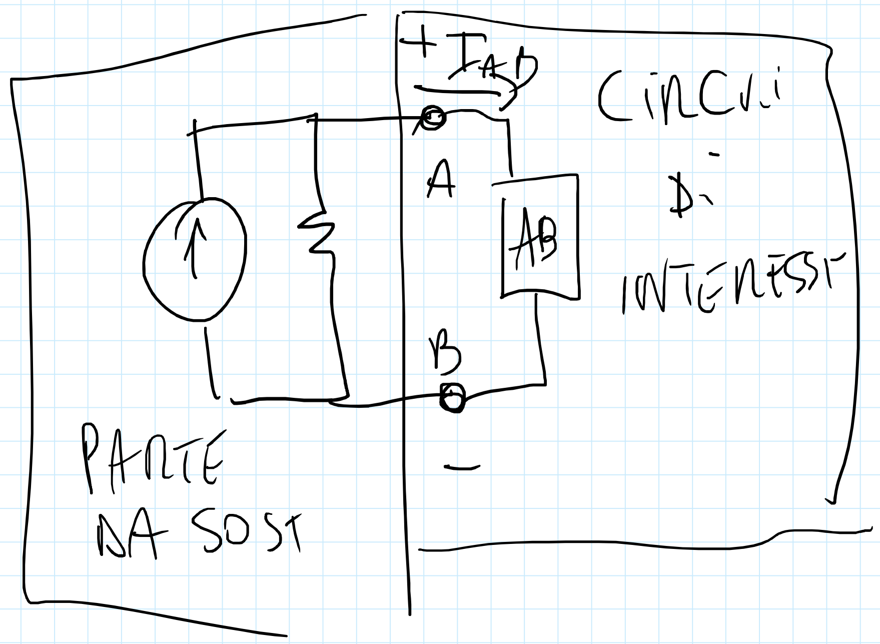


(V_α, i_α di tutti i componenti

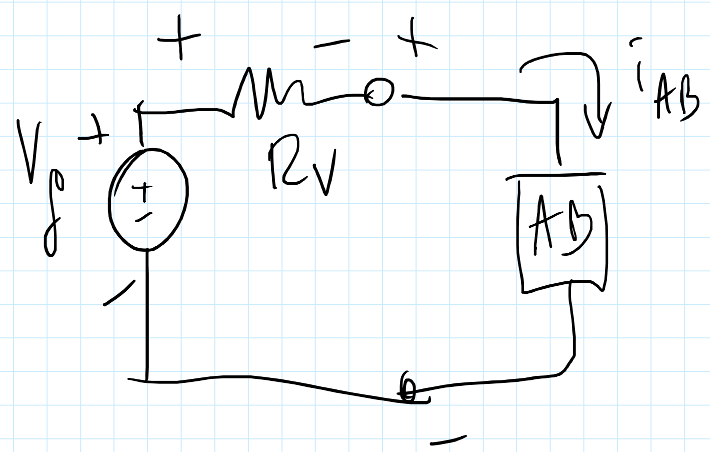




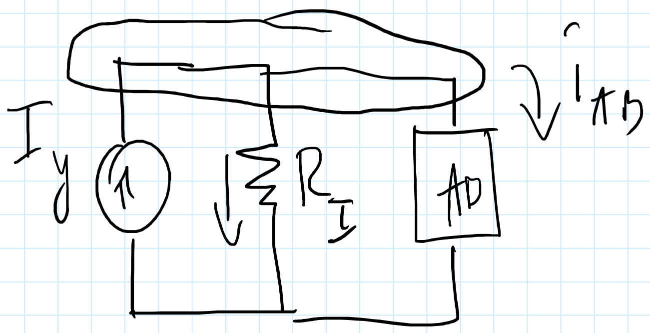
$\doteq$



V_{AB}, I_{AB} COINCIDONO $\forall$ V_{AB} o I_{AB}



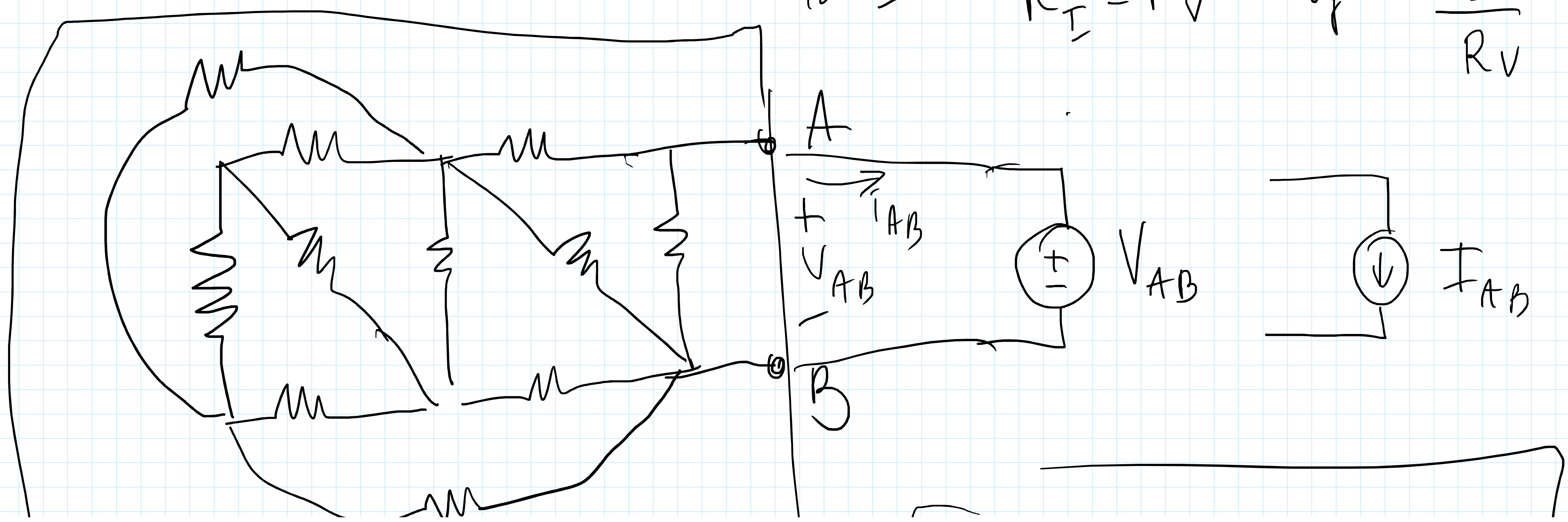
$$i_{AB} \cdot R_V + V_{AB} = V_g$$



$$i_{R_I} + i_{AB} = i_g \qquad i_{R_I} = \frac{V_{AB}}{R_I}$$

$$\boxed{\frac{V_{AB}}{R_I} + i_{AB} = i_g} \doteq \boxed{\begin{array}{l}\alpha = 1 \quad \beta = R_V \\ V_{AB} + i_{AB} R_V = V_g\end{array}}$$

$\alpha = \frac{1}{R_I}$ $\quad \beta = 1 \qquad R_I = R_V \qquad i_g = \frac{V_g}{R_V}$

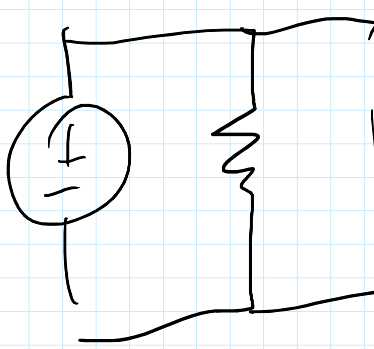


PORZ DA SOST

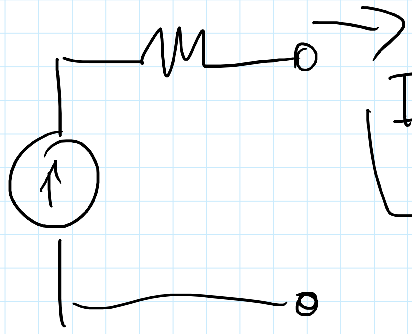
$$\boxed{\alpha V_{AB} + \beta I_{AB} = 0}$$

$$V_{AB} = -R_{AB}\, i_{AB} \qquad R_{AB} = -\frac{V_{AB}}{I_{AB}}$$

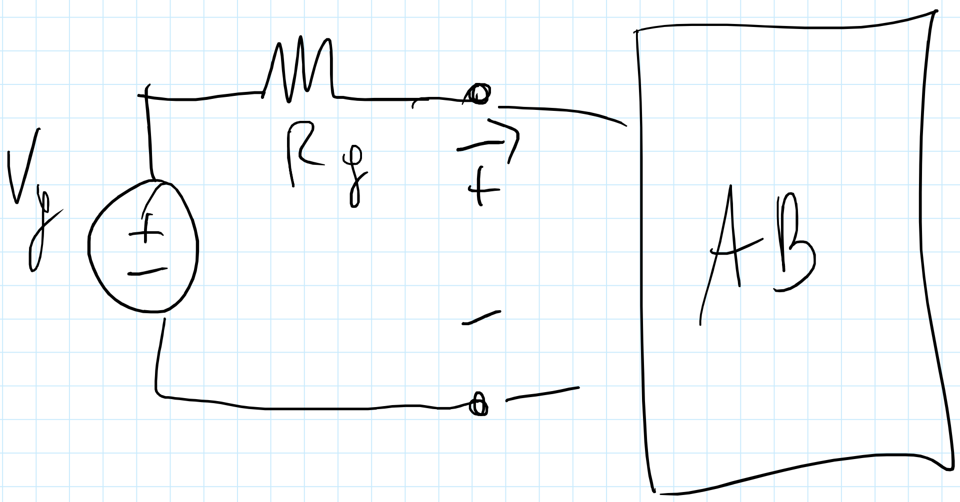
$$i_{AB} = -G_{AB}\, V_{AB} \qquad G_{AB} = -\frac{I_{AB}}{V_{AB}}$$



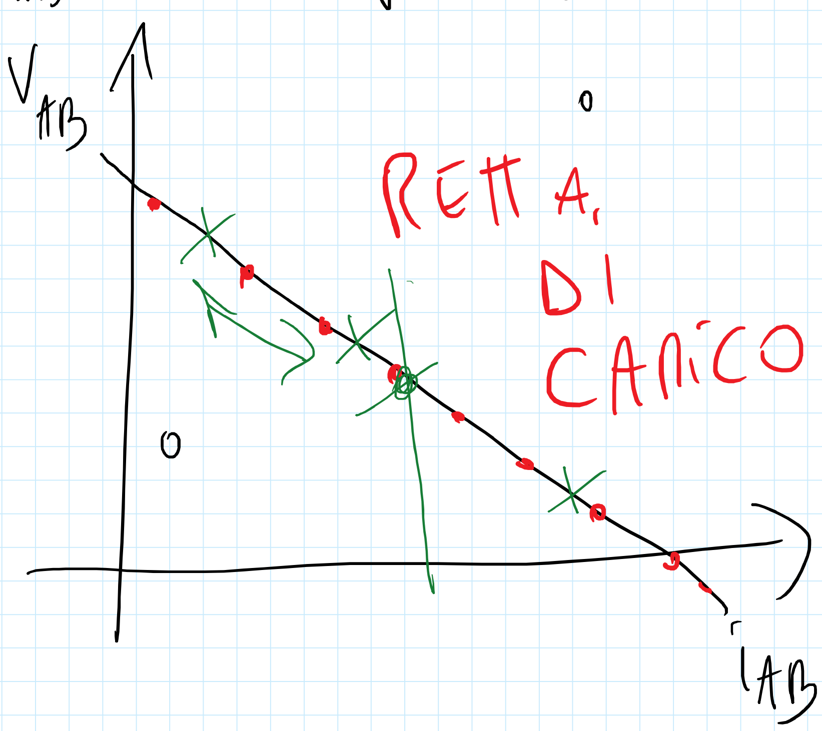
$V_{AB} = V_g$

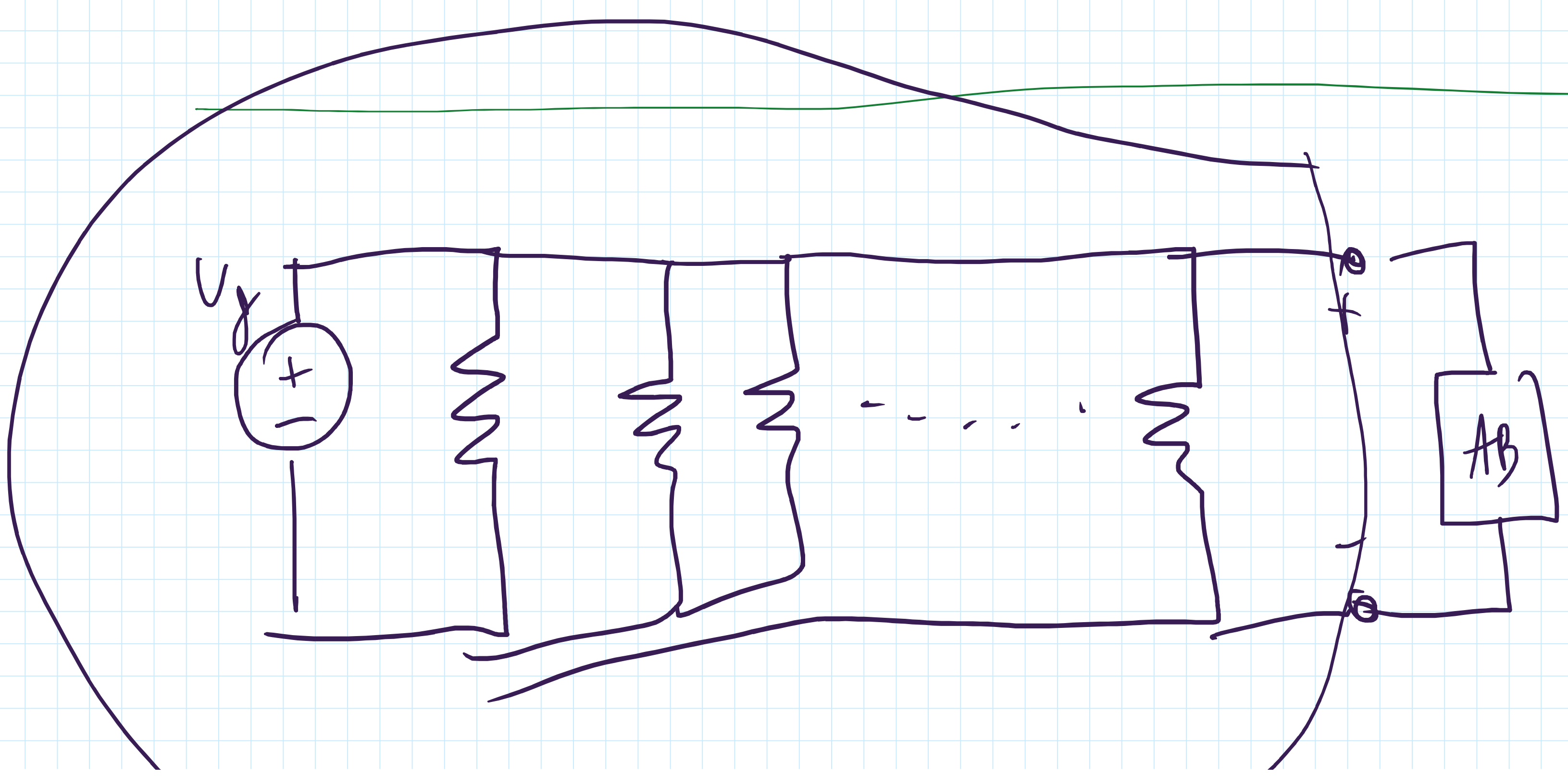


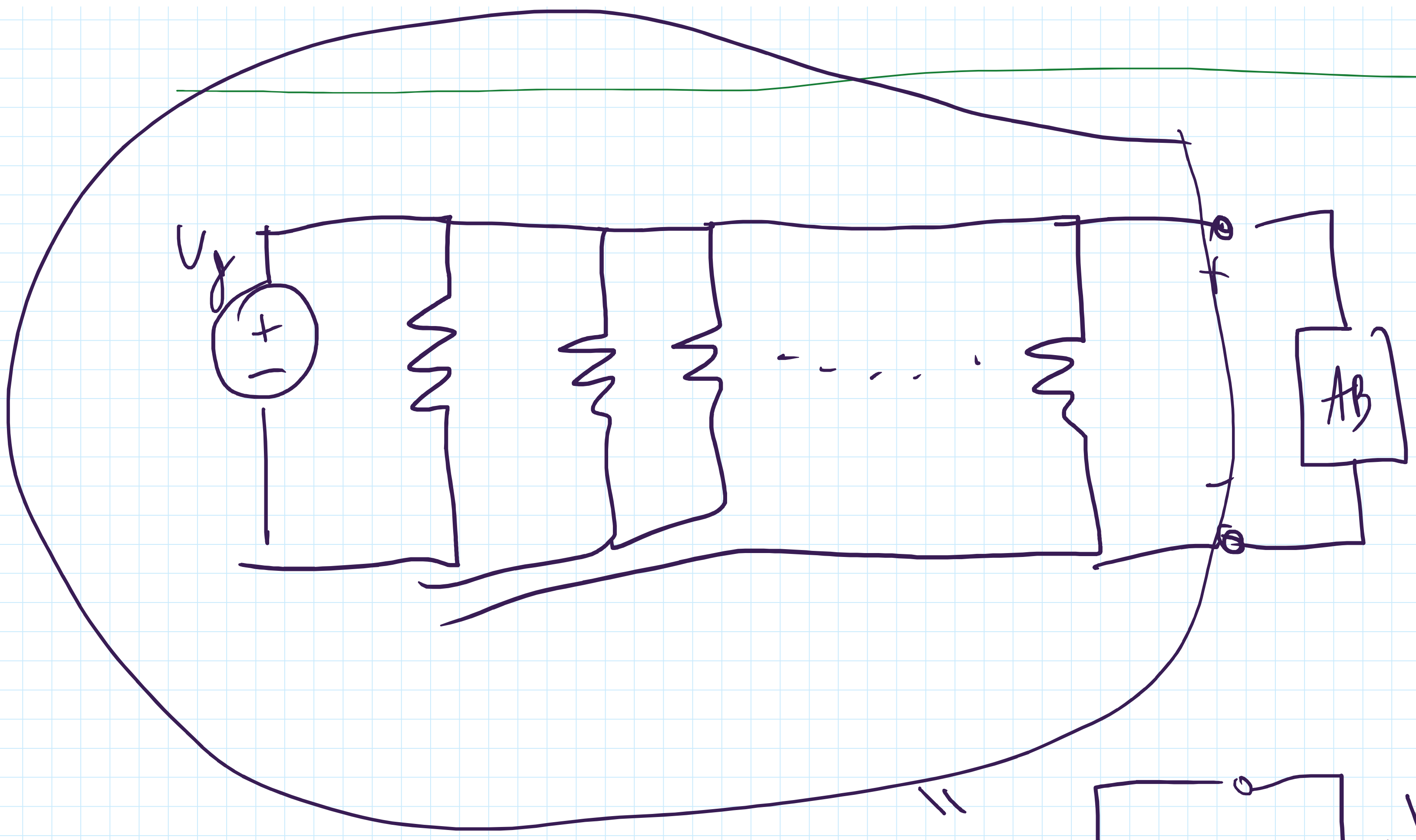
$I_{AB} = i_g$



$$V_{AB} + i_{AB} R_g = V_g$$







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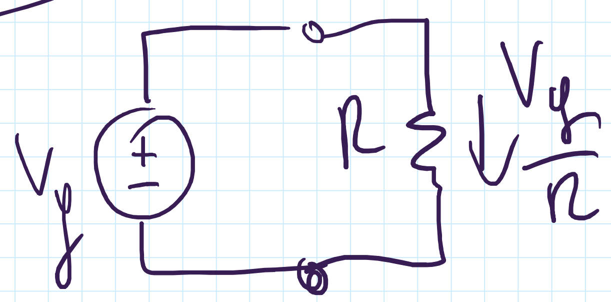
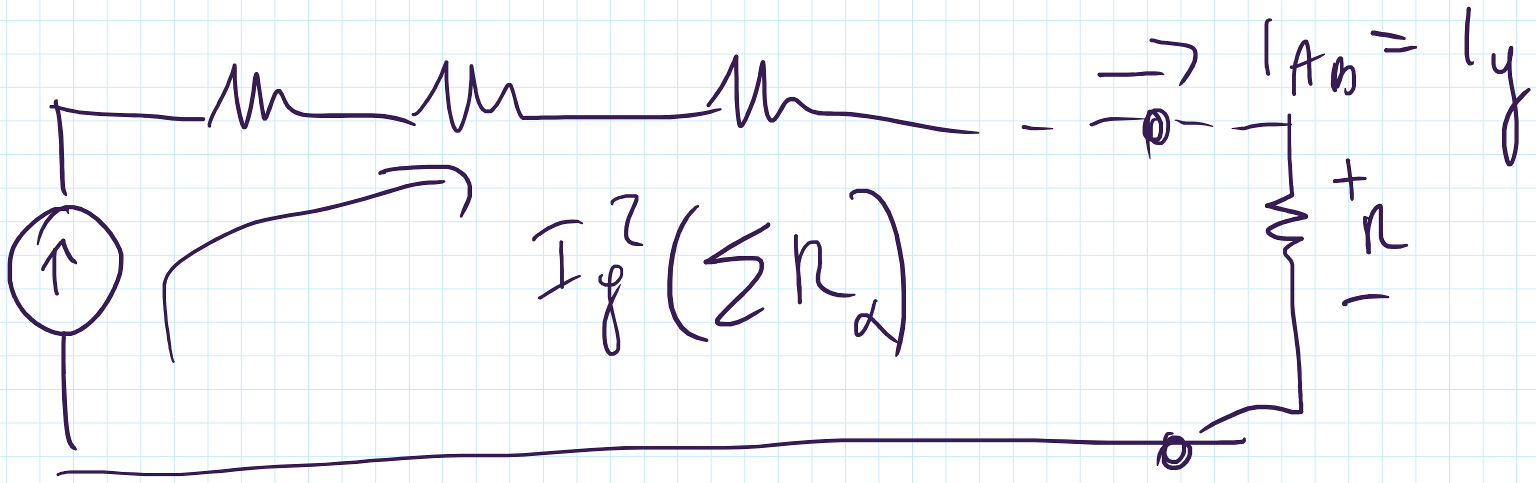
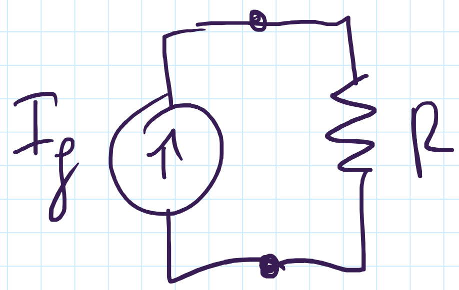


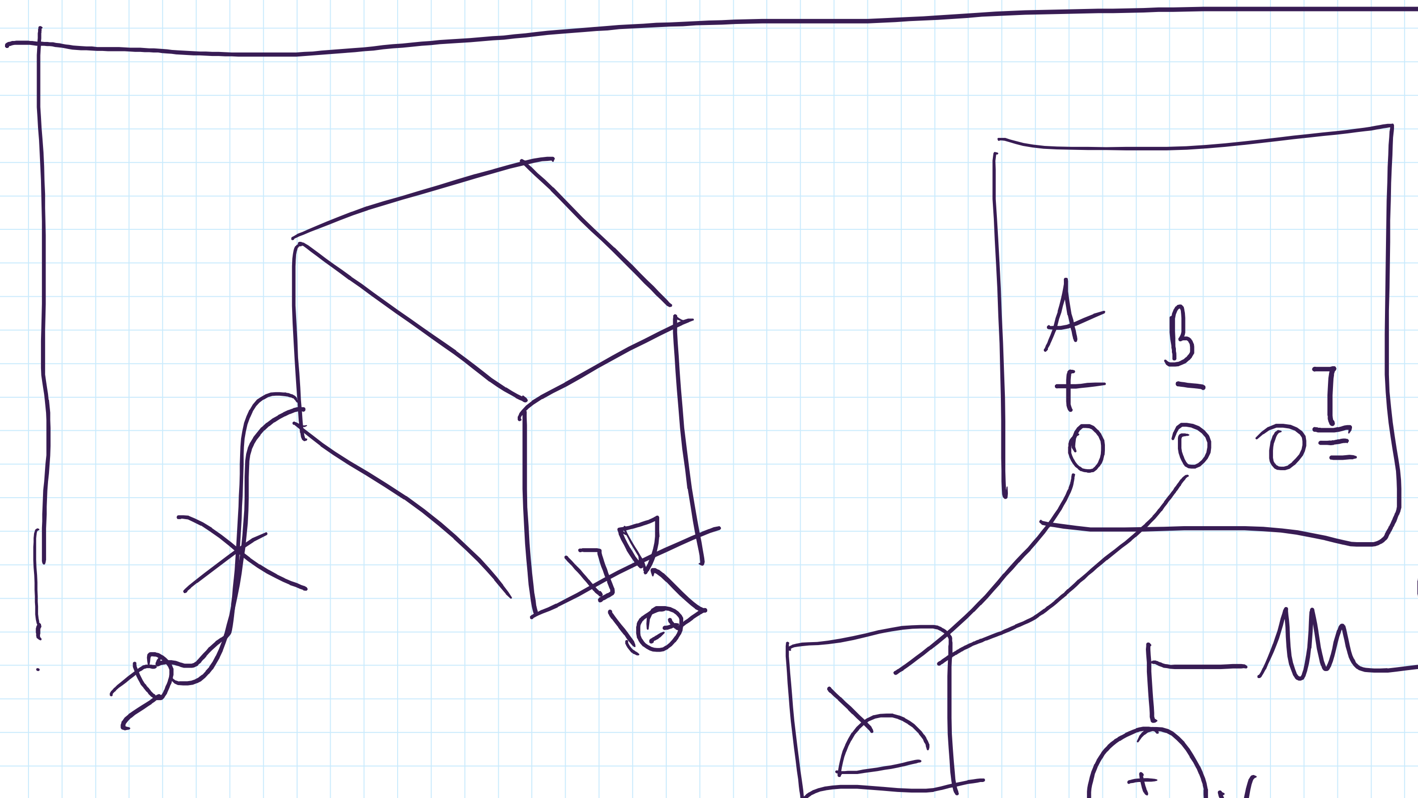


$$I_g^2 \left(\sum R_\alpha\right)$$

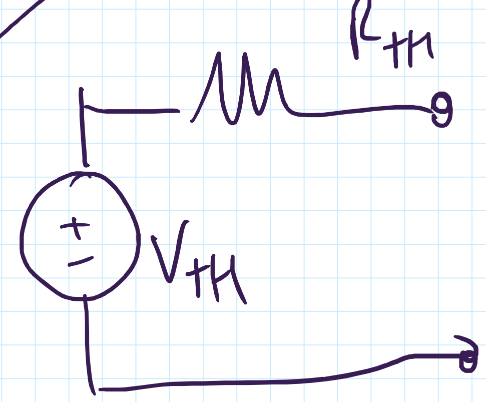
=



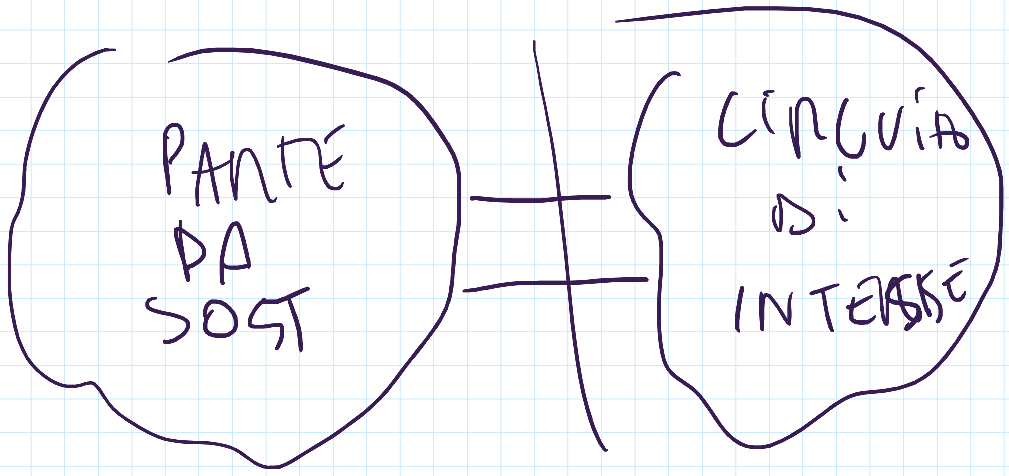
$$I_g^2 R$$



$$R_{TH} = \frac{V_{AB\ PROVA}}{I_{AB\ PROVA}}$$



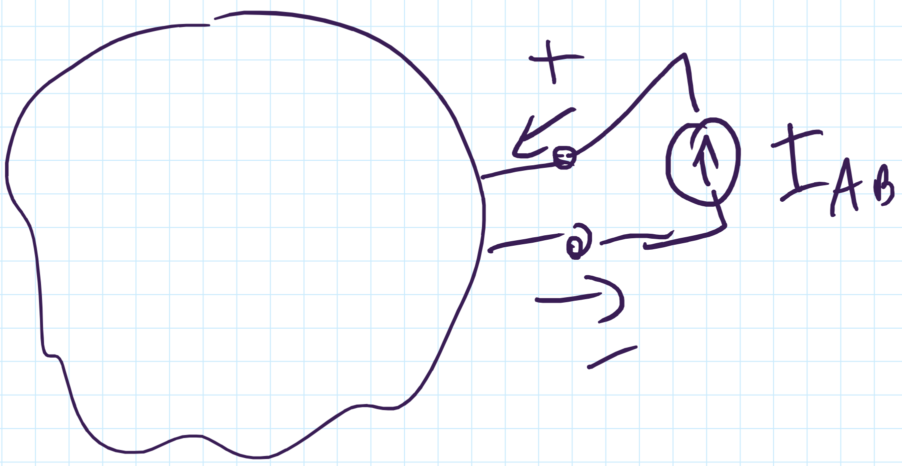
$$V_{TH} = V_{AB_{VUOTO}}$$



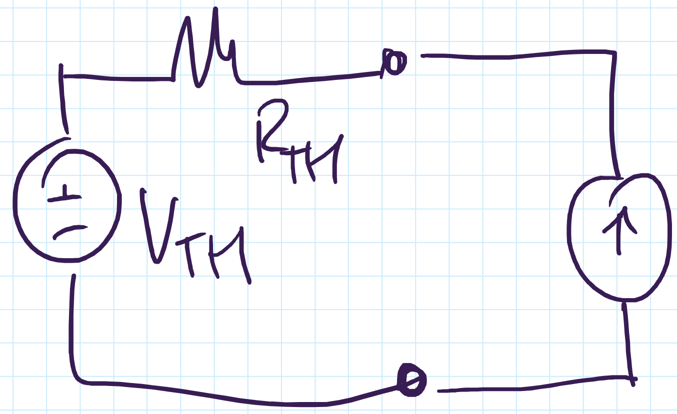
$V_i \ , I_i$

$\Downarrow$

APPLICO SOSTITUZIONE



$\doteq$

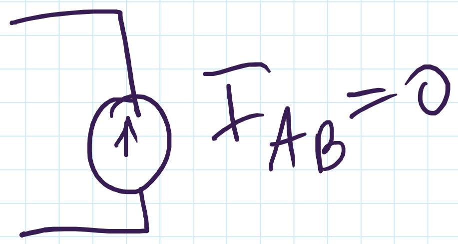


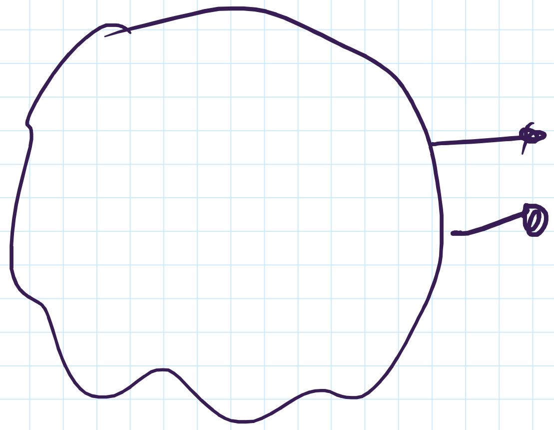
$\Downarrow$

APPLICO PSE

$$V_{AB} = V_{AB}^{INTERNE}(V_i, I_i) + V_{AB}^{ESTERNE}$$

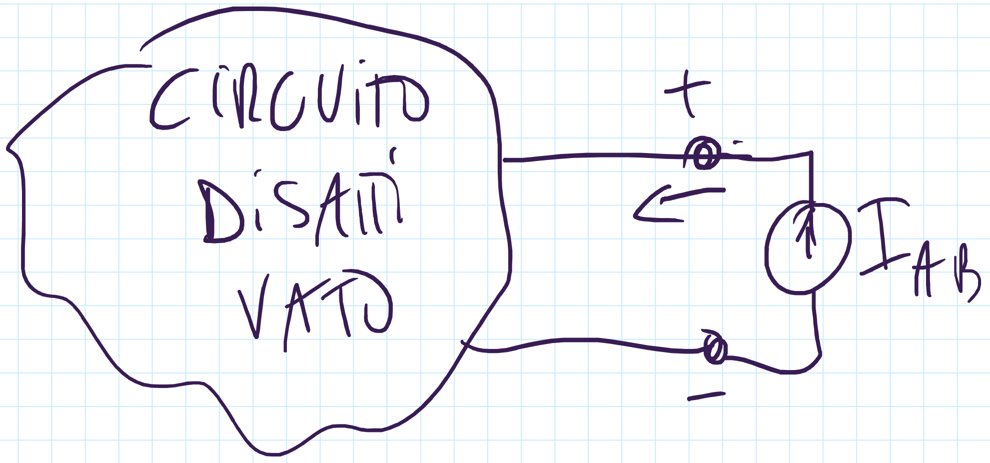
→ SOLO INTERNE





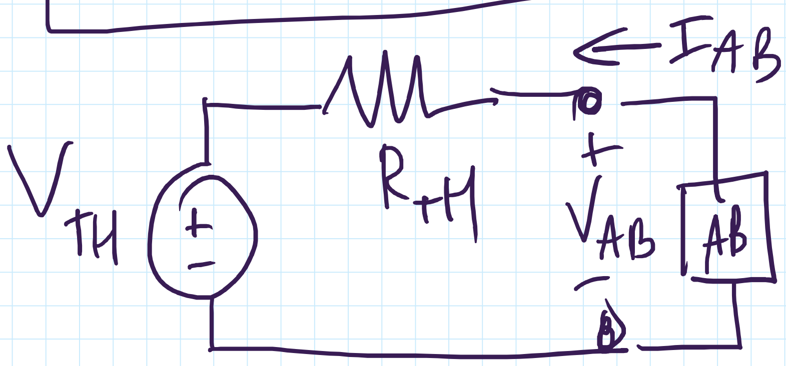
$V_{AB}^{INTERNE} \doteq V_{AB}^{VUOTO} = V_{TH}$

→ SOLO ESTERNE



$$V_{AB}^{ESTERNE} = I_{AB} \cdot R_{AB}$$

$$V_{AB} = V_{TH} + I_{AB} R_{AB}$$ EQ DI PORTA



$$V_{AB} = V_{TH} + I_{AB} R_{AB}$$