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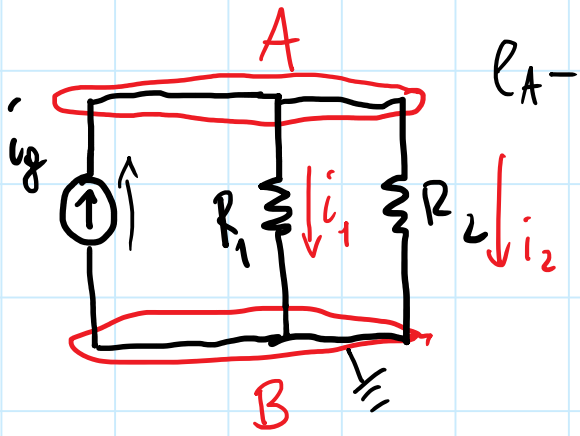

$$e_A - e_B = V_{AB} = V_{i_g} = V_{R_1} = V_{R_2} = e_A$$

NODO A

$$\sum_k i_k = 0$$

$e_B = 0$

POTENZIALE B = 0

$$+i_1 + i_2 - i_g = 0$$

NODO A $\quad i_1 + i_2 = i_g$

LA CORRENTE i_g È RIPARTITA TRA LE 2 R

1 APPLICO KIRCHHOFF

2 APPLICO REL. COSTITUTIVE

$$i_1 + i_2 = i_g \Rightarrow i_1 = i_g \frac{R_2}{R_1 + R_2}$$

$$i_1 = \frac{V_{AB}}{R_1} = \frac{e_A}{R_1} \Rightarrow e_A = i_1 R_1$$

$$i_2 = \frac{V_{AB}}{R_2} = \frac{e_A}{R_2} \Rightarrow e_A = i_2 R_2$$

$$i_1 R_1 = i_2 R_2$$

$$i_2 = \frac{i_1 R_1}{R_2}$$

$$i_1 \left(1 + \frac{R_1}{R_2}\right) = i_g \Rightarrow i_1 \left(\frac{R_1 + R_2}{R_2}\right) = i_g \Rightarrow$$

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$$i_1 = i_g \frac{R_2}{R_1+R_2}$$

$$i_2 = i_g \frac{R_1}{R_1+R_2}$$

PARTITORE DI CORRENTE

$$i_1 + i_2 = i_g$$

$$i_1 + i_2 = i_g$$

$$i_1 R_1 = i_2 R_2 = R_A$$

$$G_1 = \frac{1}{R_1} \qquad G_2 = \frac{1}{R_2}$$

$$\frac{i_1}{G_1} = \frac{i_2}{G_2} \Rightarrow i_2 = i_1 \frac{G_2}{G_1}$$

$$i_1\left(1 + \frac{G_2}{G_1}\right) = i_g \Rightarrow i_1 = i_g \frac{G_1}{G_1+G_2}$$

$$i_2 = i_g \frac{G_2}{G_1+G_2}$$

PARTITORE CORRENTE

PARTITORE TENSIONE

$$V_1 = V_g \frac{R_1}{R_1+R_2}$$

$$V_2 = V_g \frac{R_2}{R_1+R_2}$$

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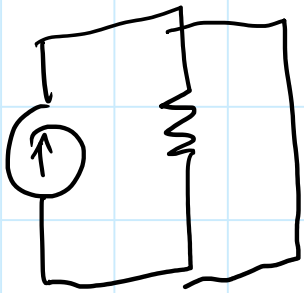
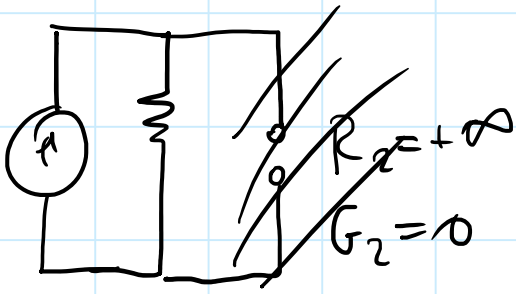


$R_2 = 0 \Rightarrow G_2 = \infty$

$\Downarrow$

C.C.

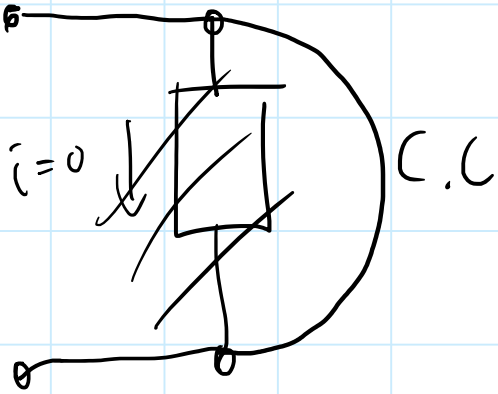


$R_2 = +\infty$

$G_2 = 0$

$$i_2 = \frac{G_2}{G_1 + G_2} i_g = i_g$$

$$i_2 = \frac{G_2}{G_1 + G_2} i_g = 0$$

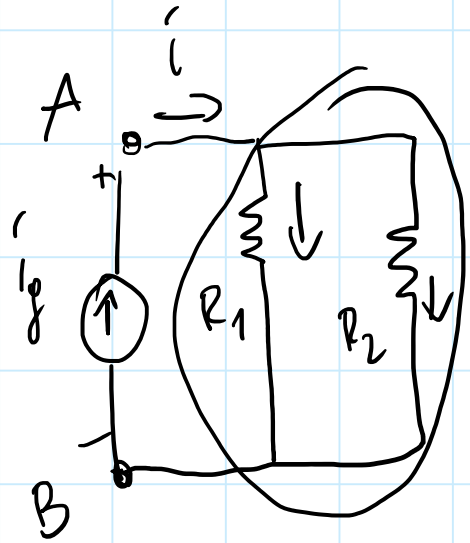


$i = 0$

C.C

$$V_{AB} = V_A = (i_1) R_1 = R_1 \cdot \left(i_g \cdot \frac{R_2}{R_1 + R_2} \right)$$

$$= i_g \cdot \frac{R_1 R_2}{R_1 R_2} = V_{eq} = i_g \cdot R_{eq}$$



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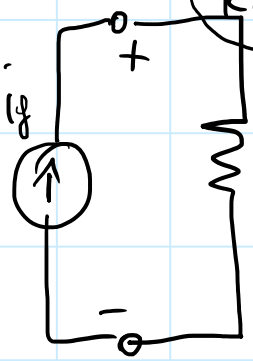

$$R_{eq} = \frac{R_1 R_2}{R_1 + R_2}$$

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