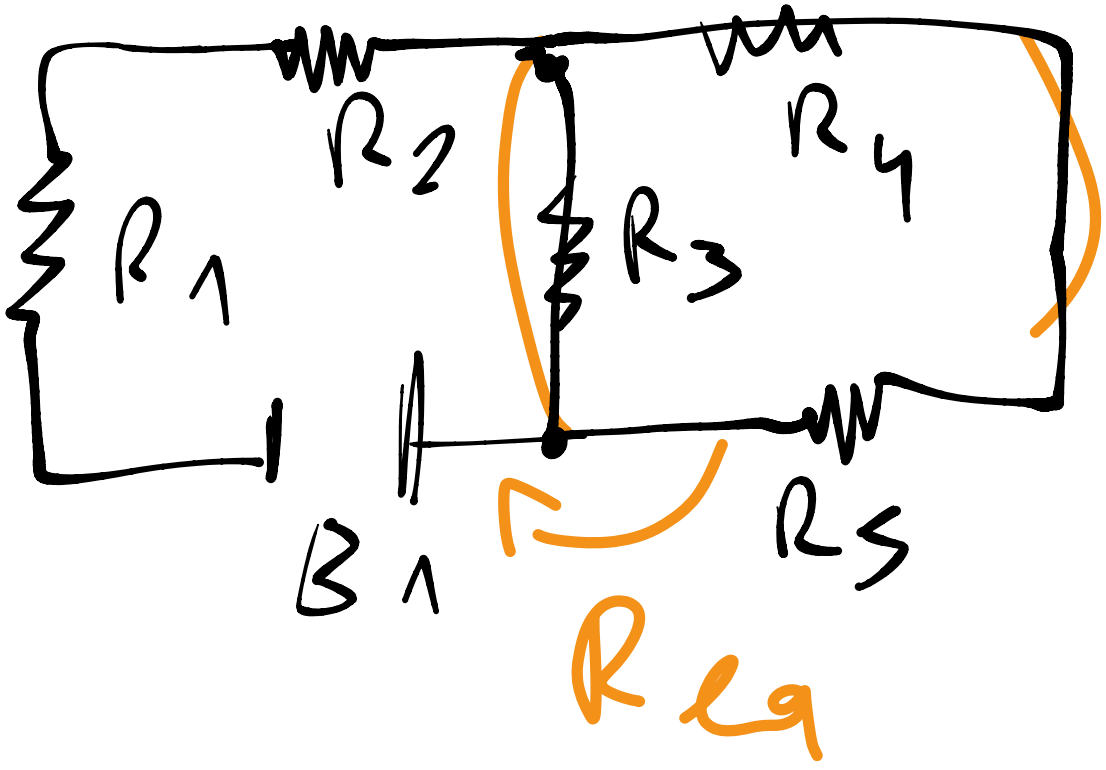
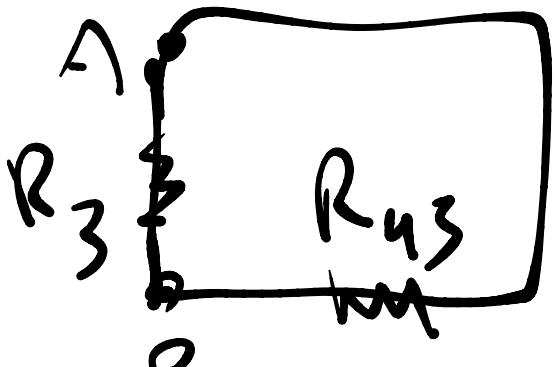
$$I_1 = I_1' + I_2''$$

Troviamo I_1 con solo B_1



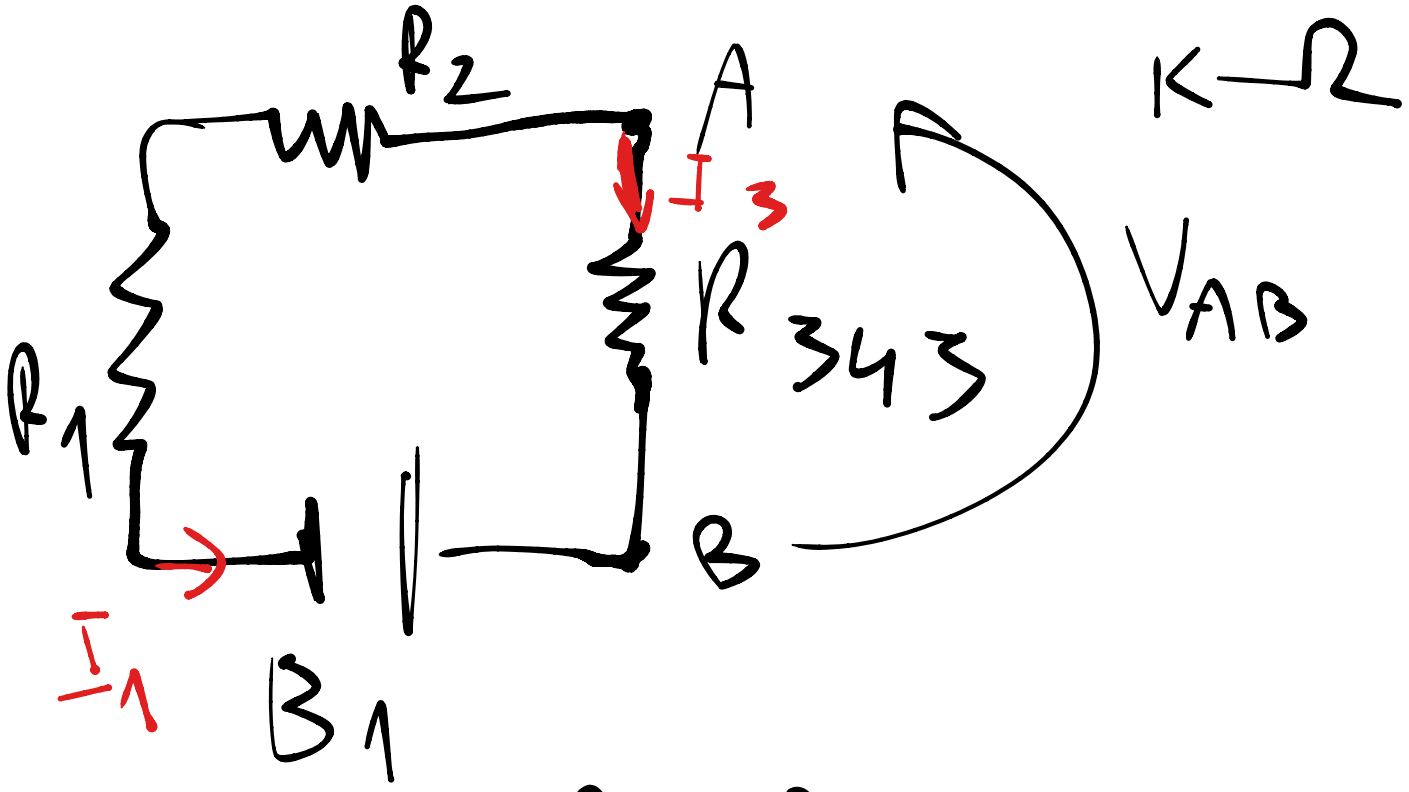
$R_4 // R_3 \rightarrow R_4 // R_3 = \dfrac{R_4 \cdot R_3}{R_4 + R_3}$



$= \dfrac{6 \cdot 9}{6+9} = \dfrac{54}{15}\ k\Omega$

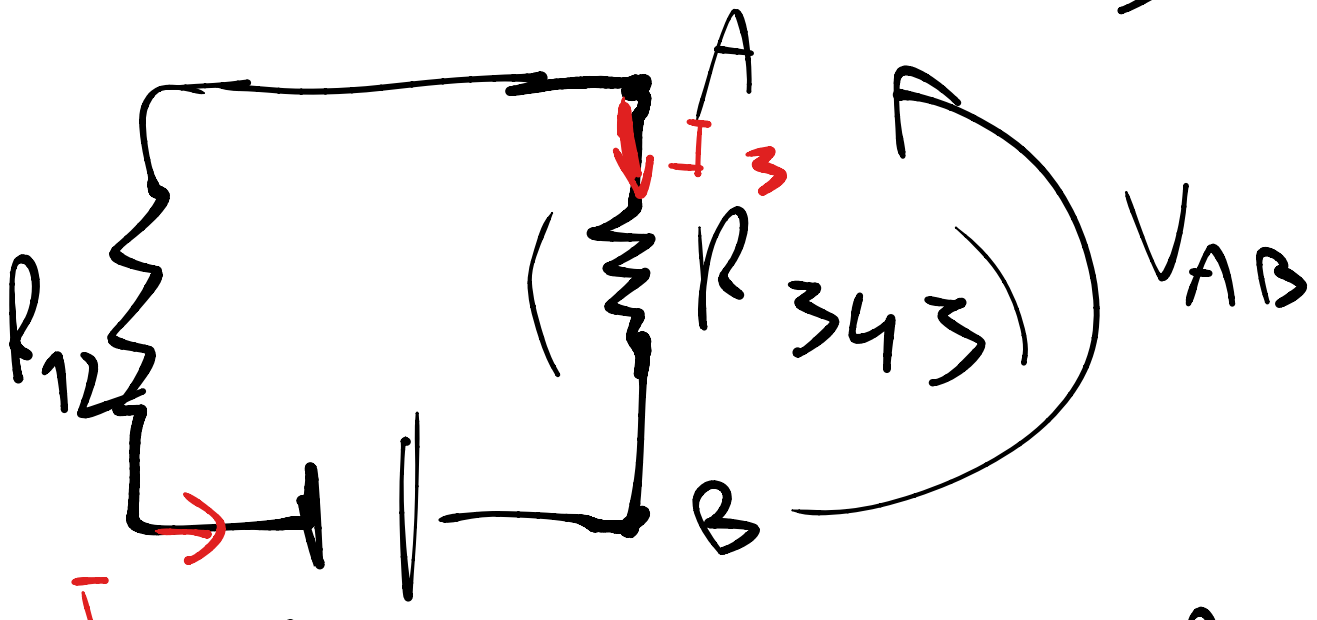
$= 3.6 K\Omega$

$R_3 + R_{45} = 5 + 3.6 = 8.6$ KΩ



$R_1 + R_2 = 2 + 3 =$

5 KΩ



$V_{AB} = B_1 \cdot \frac{R_{345}}{\Omega}$

$R_{12}+R_{345}$

$$= 18 \cdot \frac{8.6}{8.6+5} =$$

$$11.34\ V$$

$(V = R \cdot I)$ Legge di Ohm generalizzata

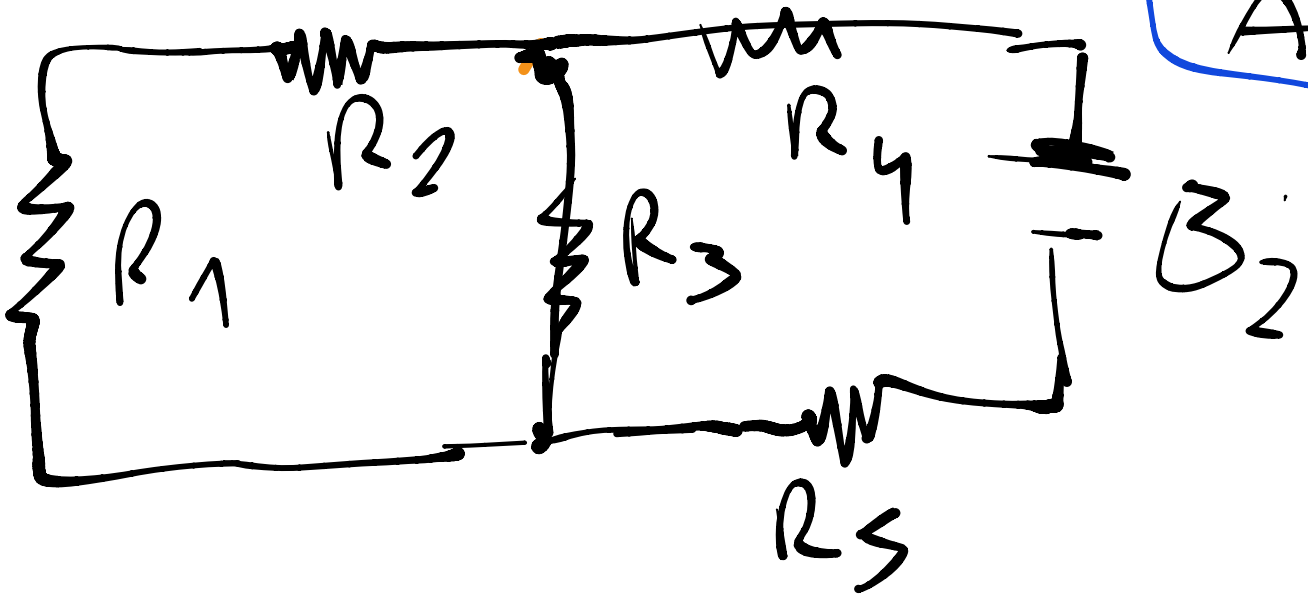
$$\downarrow$$

$$\frac{V_{AB}}{R_3} = \frac{R_3 (-I_3')}{R_3}$$

$$= \frac{11.34}{5} = \boxed{2.23\ A}$$

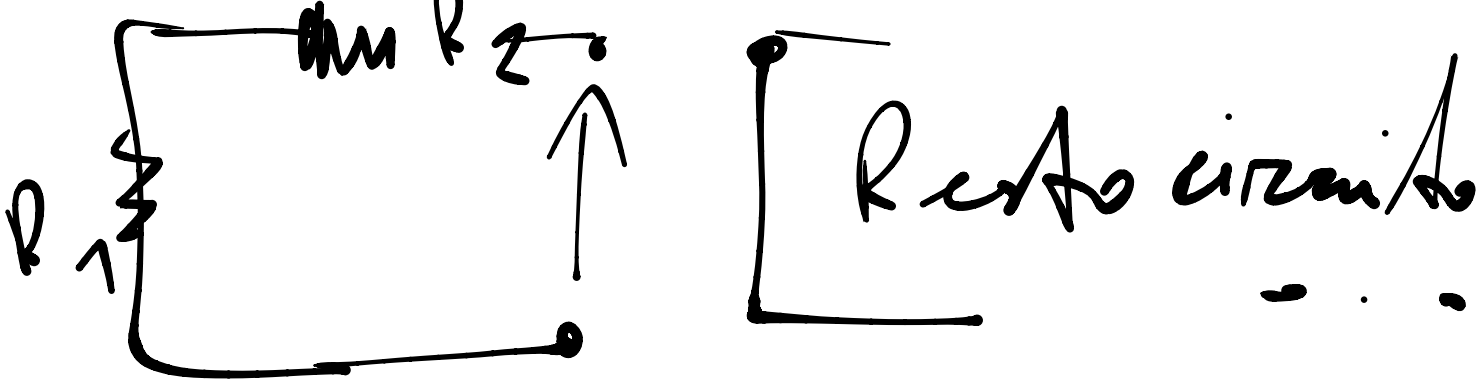
$$I_1' = \frac{V_{AB}}{R_1} = \frac{11.34}{25.67} =$$

A

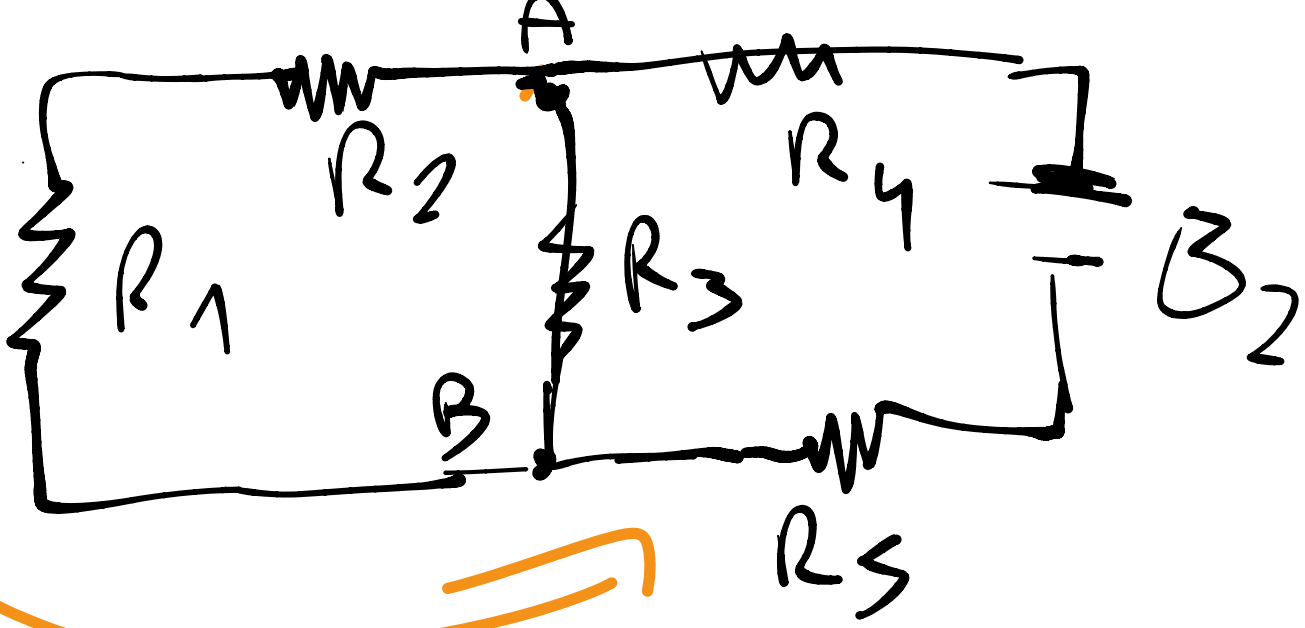


(THEVENIN...)

↑ ALTRO MODO (THEVENIN!



↑ stacco B1 e poi tensione a vuoto (Norton)



$R_{eq} = R_{123}$

$(R_1 + R_2) // R_3$

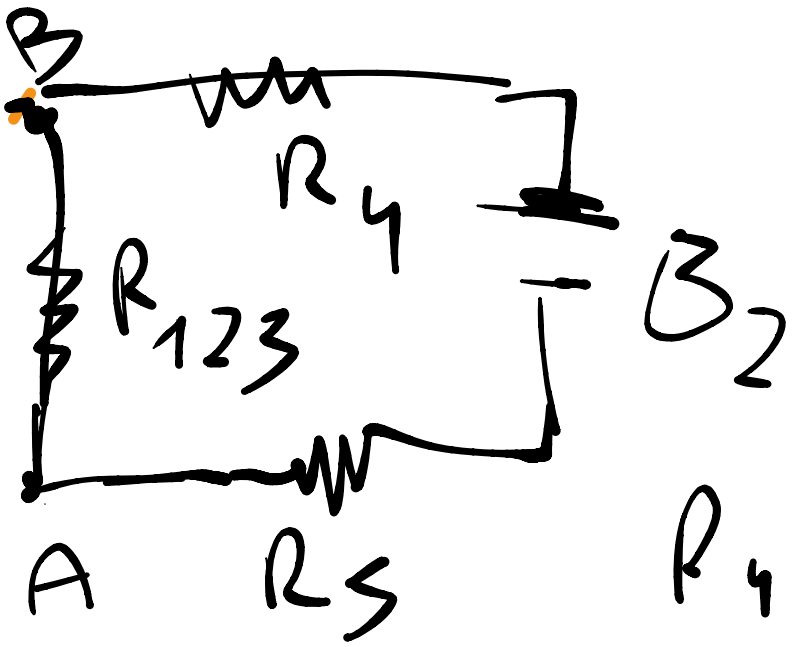
$R_1 + R_2 = S$

$R_{12} // R_3$

$$\frac{R_{12} \cdot R_3}{R_{12} + R_3}$$

$$= \frac{5 \cdot 5}{5+5}$$

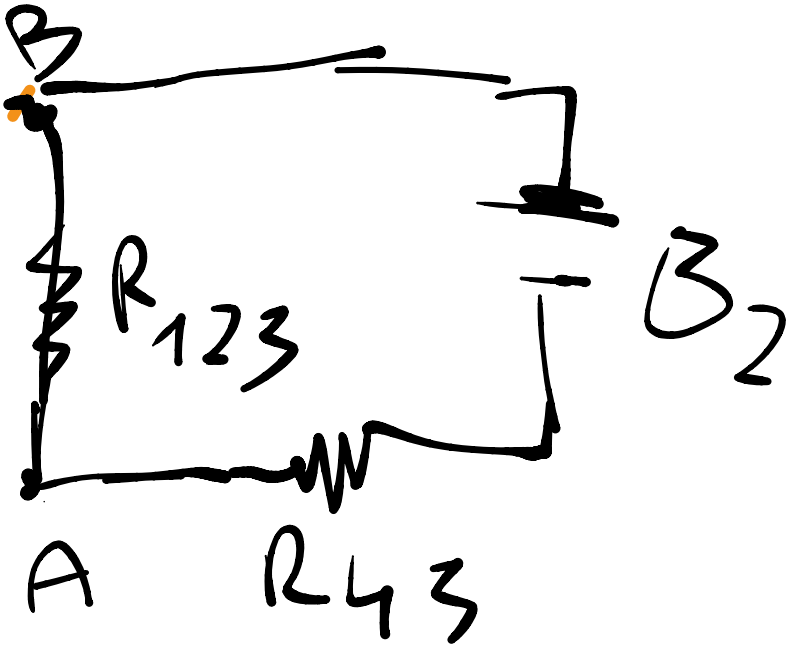
$$\frac{25}{10} = 2.5 \text{ K}\Omega$$



$R_4 // R_3 =$

$$\frac{R_4 \cdot R_3}{R_4 + R_3} = \frac{54}{15}$$

$$= 3.6 \text{ K}\Omega$$



$$V_{AB} = \mathcal{E}_2 \cdot \frac{R_{123}}{R_{123} + R_{45}} =$$

$$= 18 \cdot \frac{2.5}{2.5 + 3.6} =$$

$\mathcal{E}_1 = \mathcal{E}_2 = 18\ V$

$\Rightarrow 7.38\ V$

$(\mathcal{E} = V)$

$\Rightarrow$ Volt

= Quando si è in condizioni ideali le due sono uguali!

$$I_1'' = \frac{V_{AB}}{R_2} = \frac{7.38}{2} =$$

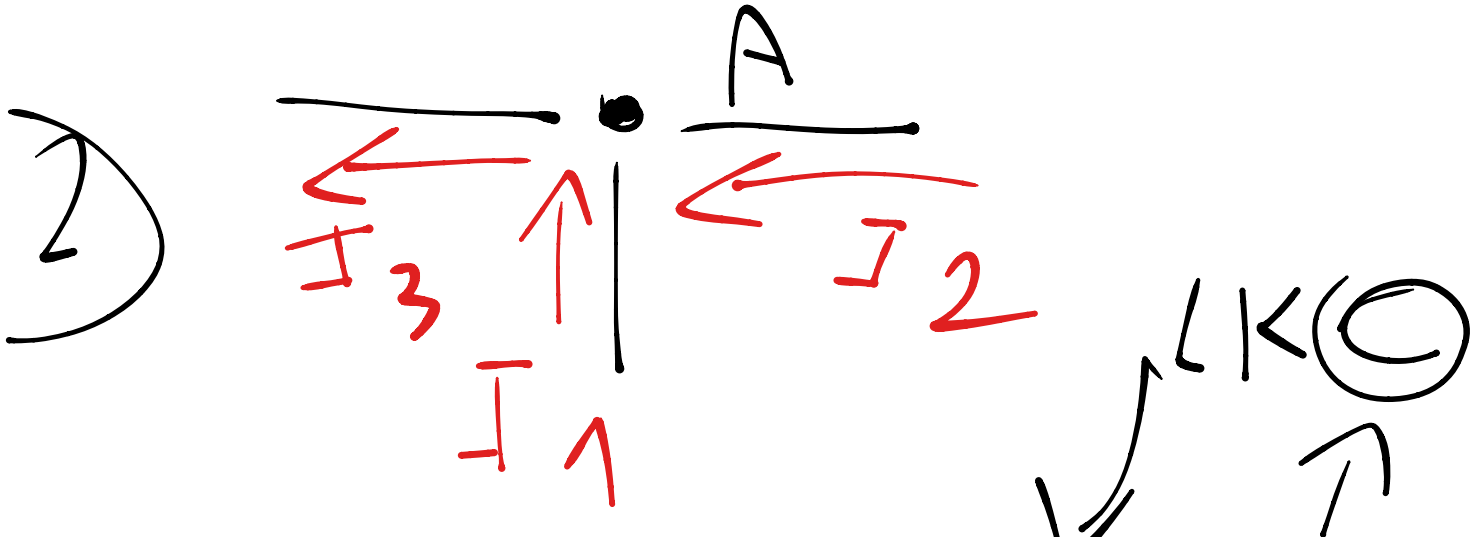
R_1 $\angle 3.69$ A

$$I_3'' = \frac{V_{AB}}{R_3} = \frac{7.38}{5} = 1.48\ A$$

$$I_1 = I_1' + I_1'' \quad 5.67 + = 3.69$$

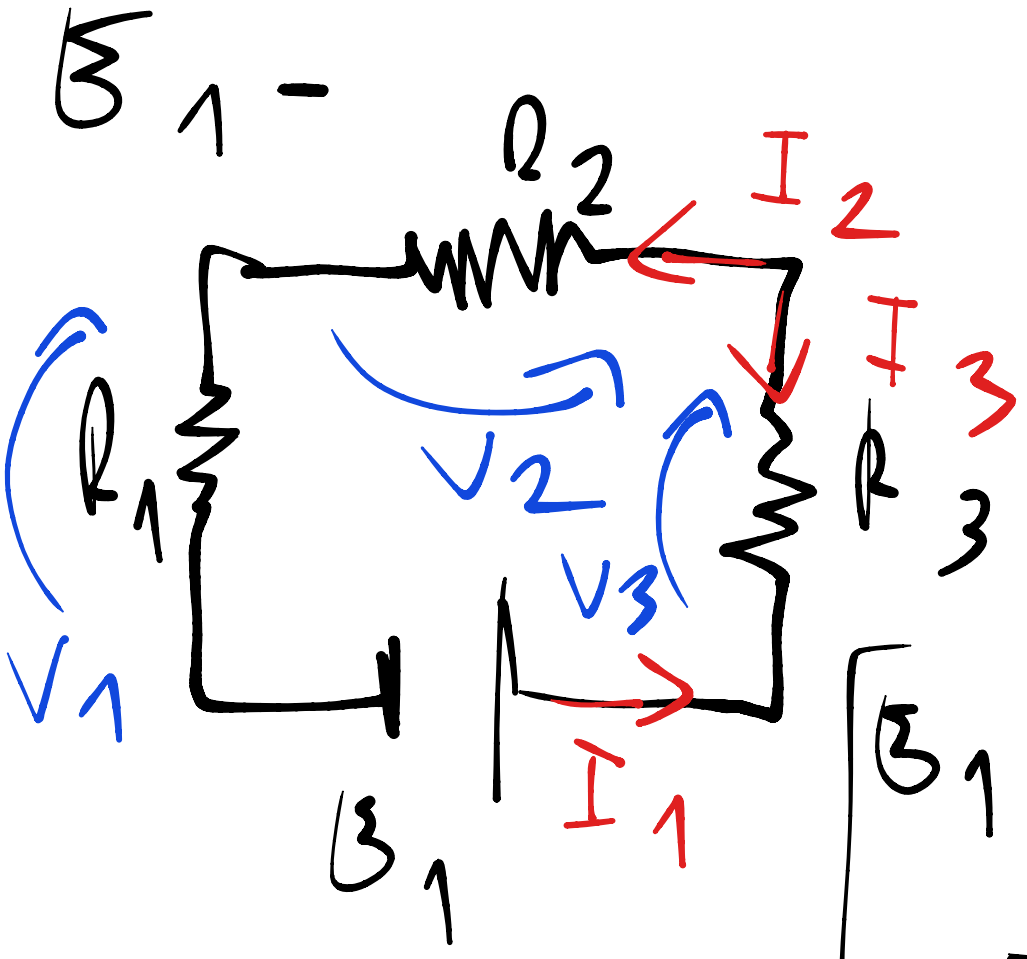
$$I_3 = I_3' + I_3'' \quad 3.36\ A \quad -2.25 + 1.48 = 3.71\ A$$

1° PUNTO



$I_1 = I_2 + I_3$ CORRENTI (NODI)

(3) Assumo positivo $\mathcal{E}_1$ (morsetto dove entra la corrente)



$$\begin{cases} \mathcal{E}_1 + V_3 = V_2 \\ -V_1 = 0 \end{cases}$$

$2^{\circ} \longrightarrow$ (LKT)

(TENSIONI / MAGLIE)

DEF. NODI/CATE

NODO → Punto di congiunzione tra fili conduttori

RAMO → Parte di maglia compresa tra due nodi

MAGLIA → Percorso chiuso delimitato da rami

1° K -> $\sum_{(K)} i_K$

K => Corrente

Q -> Coulomb

$\sum$ <- Serie / Sommatoria;

$\sum_{i=1}^{n} arr[i]$ -> for (i = 0 ; i <= M)
i++
arr[i]++;

Senso logico di una serie

for = calcolo complessità
(n. operazioni)

2° PR. → K

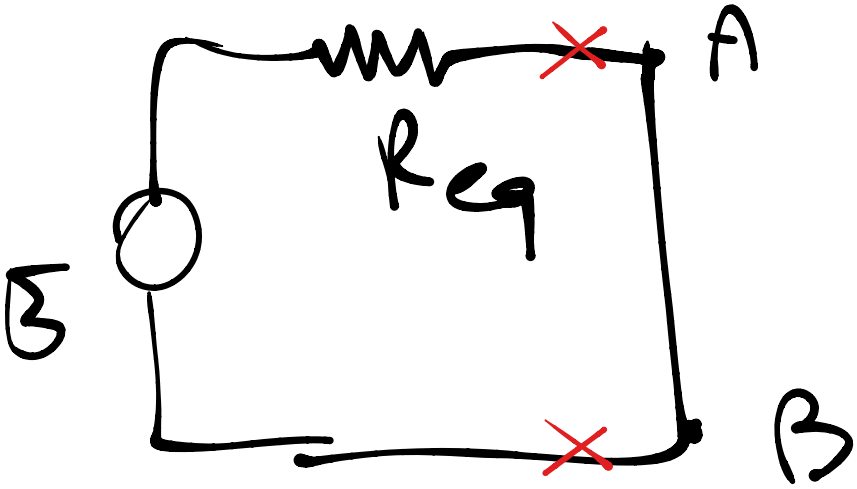
$$\sum_{(K)} V_K \circ \sum_{K} R_K \wedge_K$$

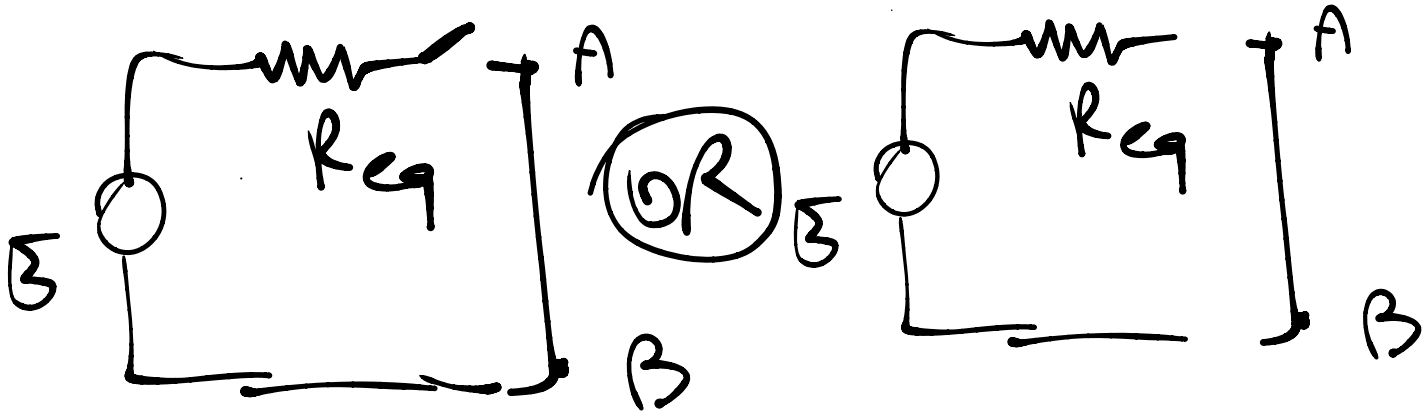
↑ INDICE

SOVR. DI GLI STESSI
=
Output di una rete
è ottenuto combinando
algebricamente tutti
gli input della rete

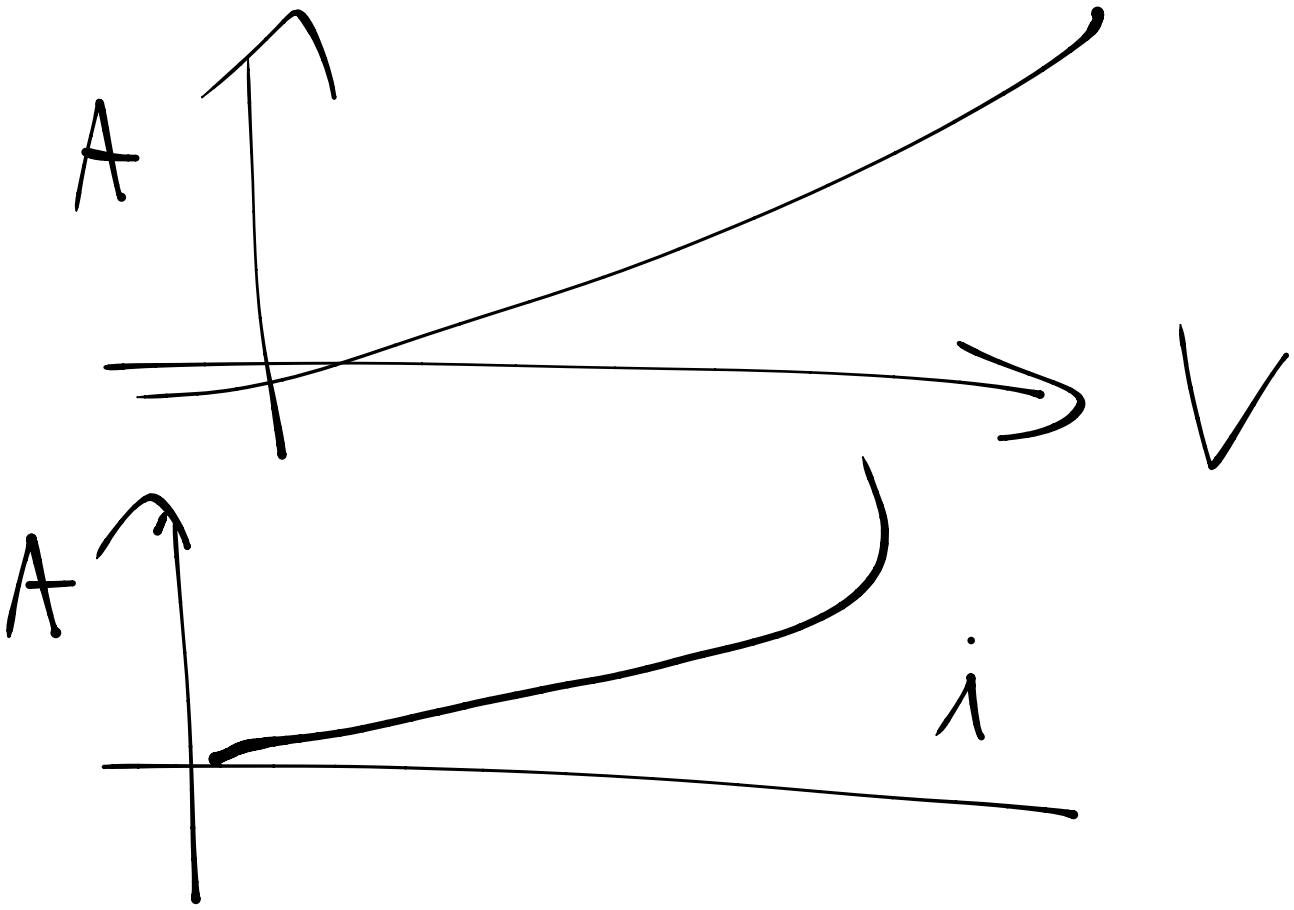
considerando l'effetto dei singoli generatori

- CORTOCIRCUITI
- QUANTI DIVERSI VALORI DI CORRENTE





R = ∅ V = IMPRIMITA !



IDEALE / REALE

f.e.m ≥ DELTA = DIFF. TENSIUNI
(generator)

$V_1 + V_2 - V_3 = \emptyset$

CI PASSA CORRENTE DENTRO!

$(\Sigma \geq V_1 - V_2 - V_3 \ldots)$

QUANTE CORRENTI IN UN CIRCUITO?

$0 < \ldots < n - 1$

(n) → n. di maglie
