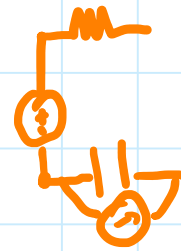
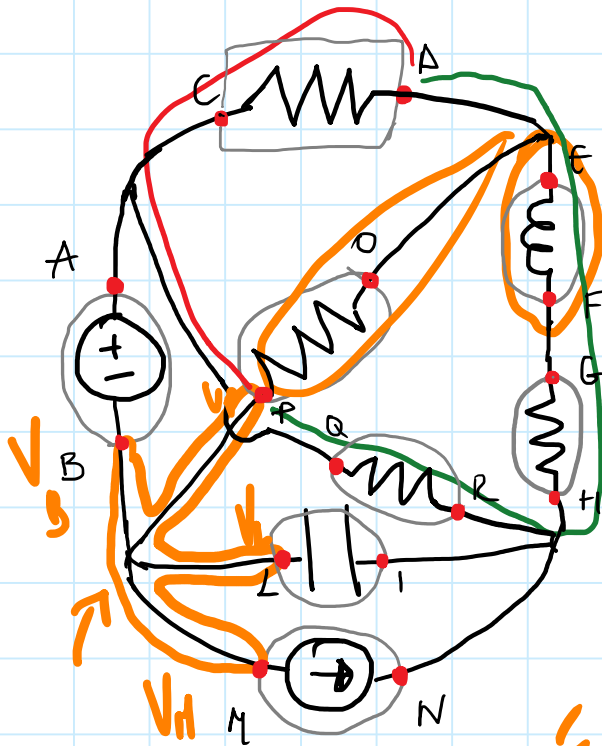
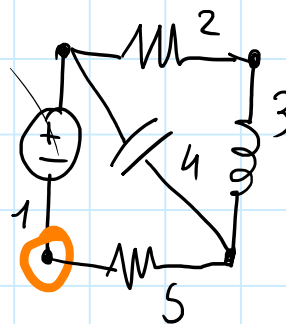
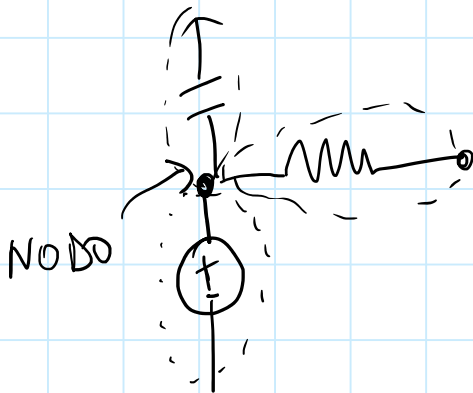


# Elementi Topologia

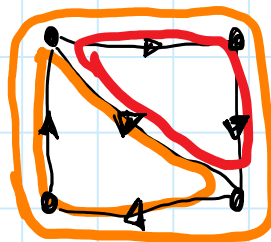
09 March 2017 02:01



SONO  
ALLO  
STESSO  
POTENZIALE

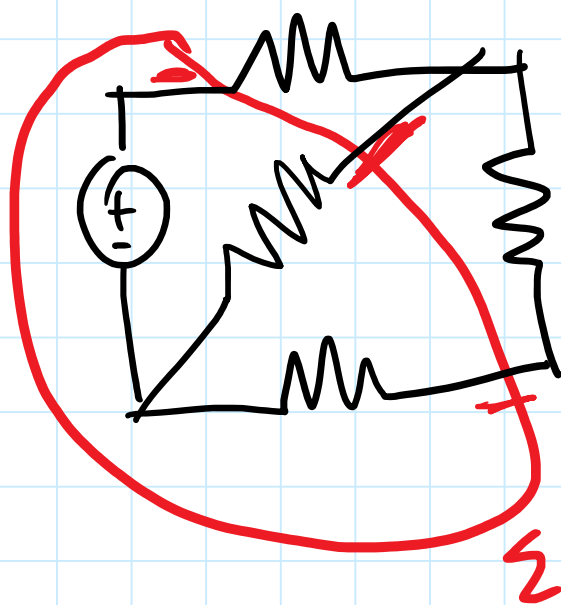
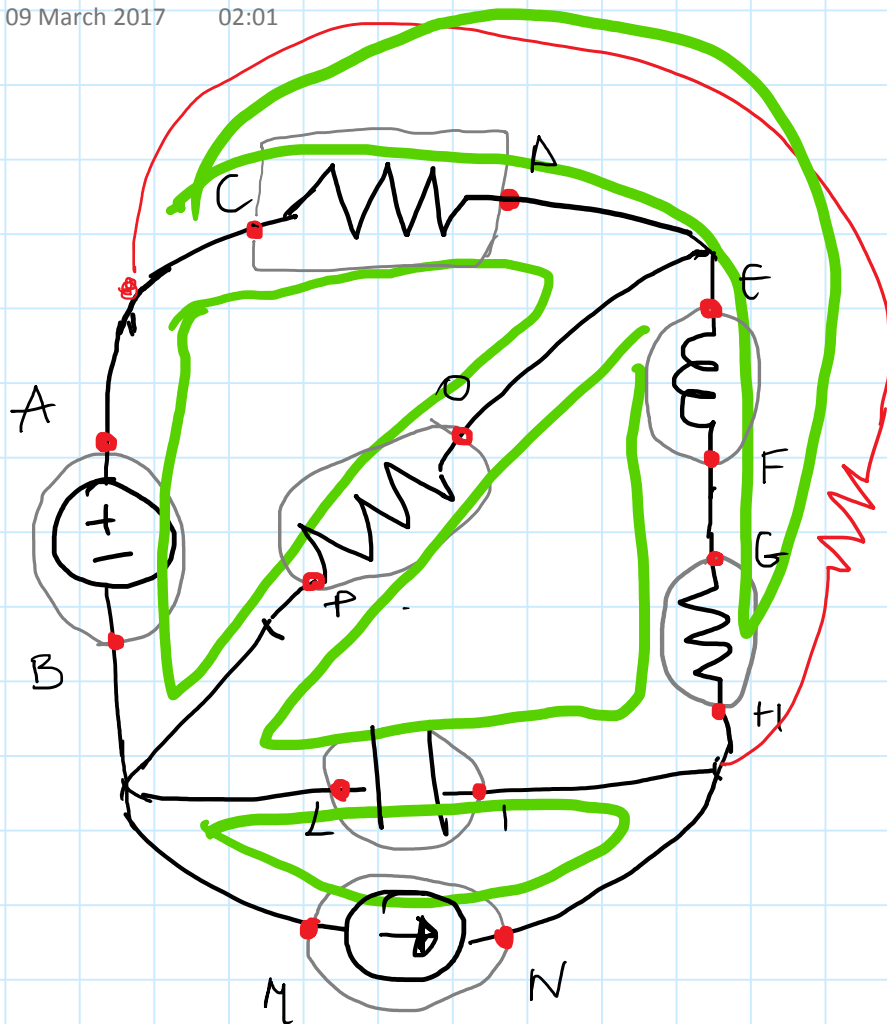


5 RAMI  
4 NODI  
**3 MAGLIE**

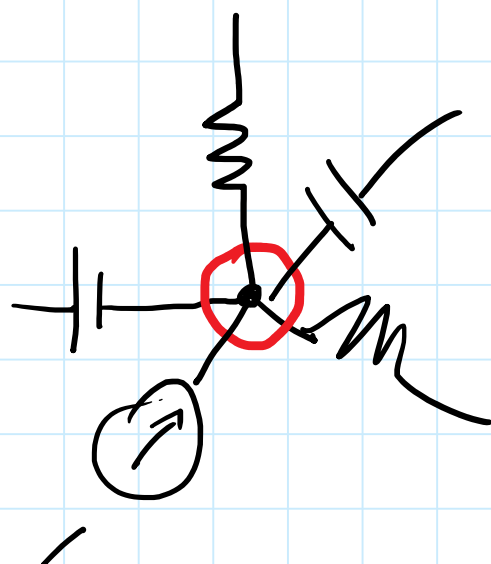


# Legge Kirchhoff correnti KCL

09 March 2017 02:01



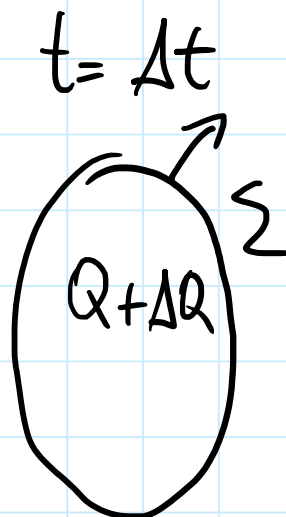
$$\sum_{\alpha} I_{\alpha}^{(Z)} = 0$$



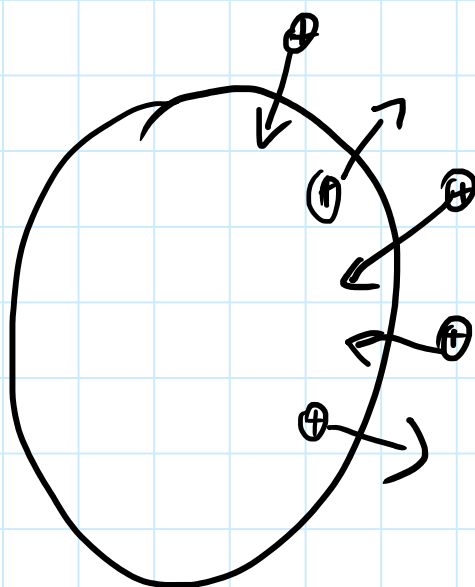
# KCL e conservazione della carica (Eq. Di continuità)

09 March 2017 02:01

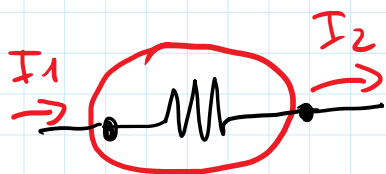
$$\vec{J} + \frac{\partial \rho}{\partial t} = 0$$



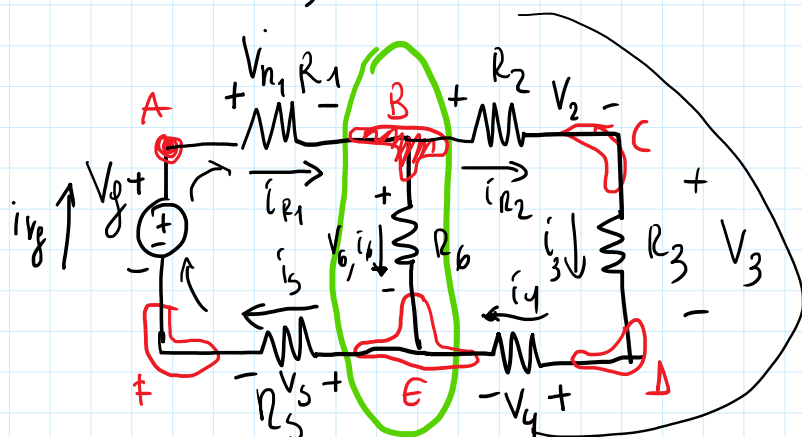
$$\Delta Q = I_{\Sigma} \cdot \Delta t$$



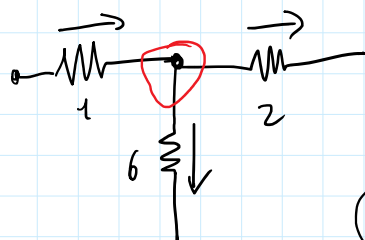
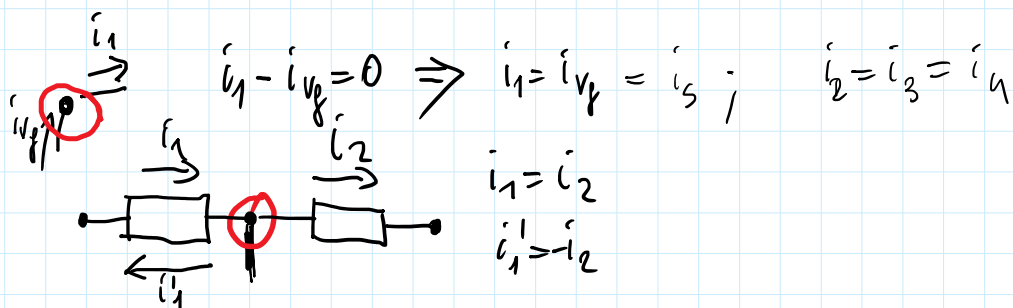
$$I = \frac{\Delta Q}{\Delta t}$$



$$I_1 - I_2 = 0 \Rightarrow I_1 = I_2$$



$R_2, R_3, R_4$   
Sow in seri



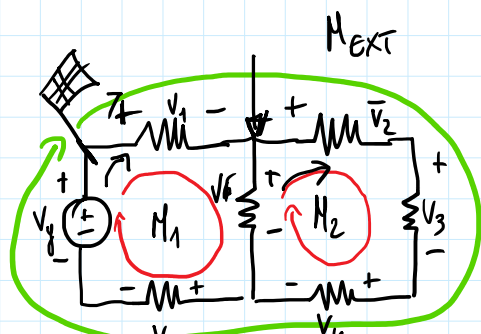
$$-i_1 + i_2 + i_6 = 0$$

$$i_6 = i_1 - i_2$$

$$(-) = -i_u + i_s - i_6 = 0$$

$$i_6 = -i_u + i_s$$

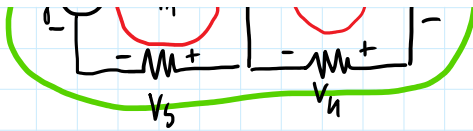
$$i_1 - i_2 + i_u - i_s = 0$$



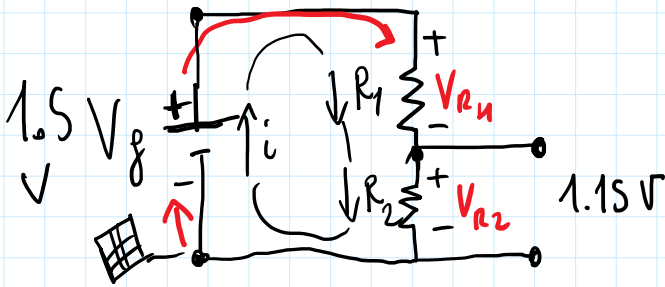
$$N_1: +V_1 + V_6 + V_5 - V_g = 0$$

$$N_2: +V_2 + V_3 + V_4 - V_6 = 0$$

=



$$M_{EXT}: +V_1 + V_2 + V_3 + V_n + V_5 - V_f = 0$$



REL. TOPOLOGICHE

KVL

⇓

current independent:

$$-V_g + V_{R1} + V_{R2} = 0$$

REL. COSTITUTIVE

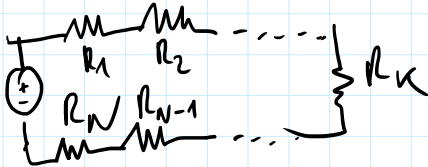
$$V_g = V_g$$

$$V_{R1} = R_1 \cdot i$$

$$V_{R2} = R_2 \cdot i$$

$$-V_g + R_1 \cdot i + R_2 \cdot i = 0$$

$$i(R_1 + R_2) = V_g \Rightarrow i = \frac{V_g}{R_1 + R_2}$$



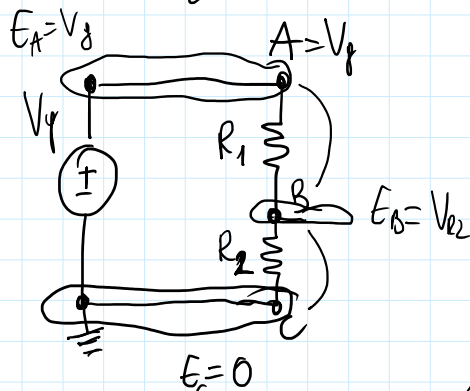
$$i = \frac{V_g}{\sum_k R_k}$$

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

$$\Rightarrow V_{R1} = ? \quad R_1 \cdot i = V_g \cdot \frac{R_1}{R_1 + R_2}$$

$$V_{R2} = ? \quad R_2 \cdot i = V_g \cdot \frac{R_2}{R_1 + R_2}$$

$$V_{R1} + V_{R2} = V_g$$



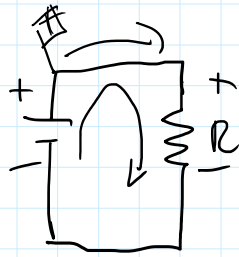
$$V_{AB} = V_{R1} = !$$

$$V_{BC} = V_{R2} = V_B$$

$$0 \leq V_1, V_2 \leq V_g$$

$$1.15 = E_B = V_g \frac{R_2}{R_1 + R_2}$$

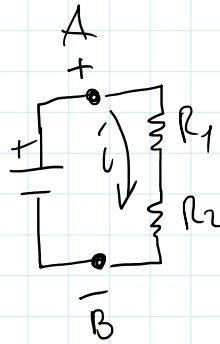
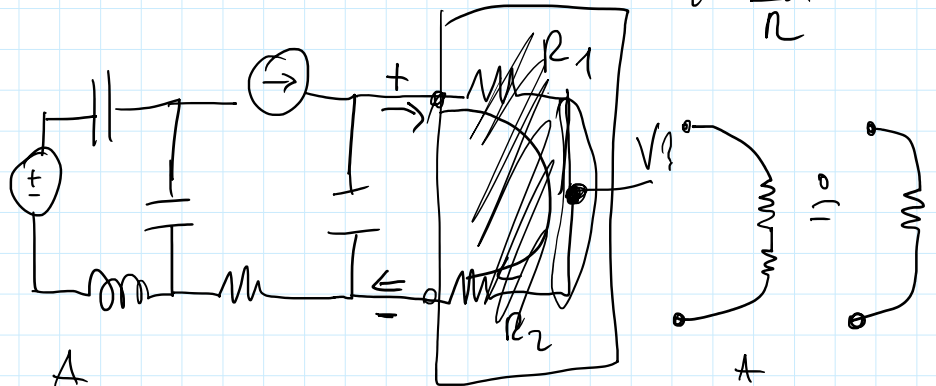
$$\frac{R_2}{R_1 + R_2} = \frac{1.15}{1.5}$$



$$V_R - V_g = 0 \Rightarrow V_R = V_g$$

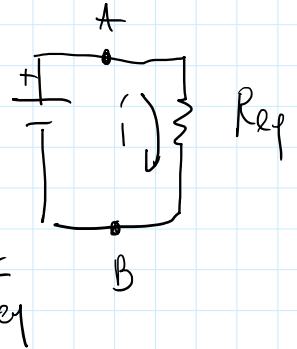
$$R \cdot i = V_g$$

$$i = \frac{V_g}{R}$$



$$V_{AB} = V_g$$

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



$$i = \frac{V_g}{R_{eq}}$$