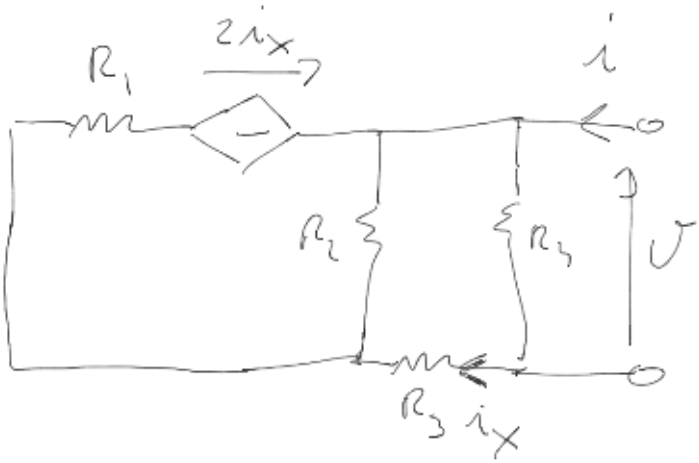
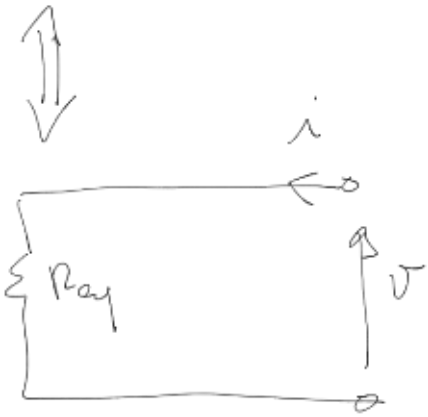
Lezione 22

METODO GENERALE PER IL CALCOLO DELLA RESISTENZA EQUIVALENTE.

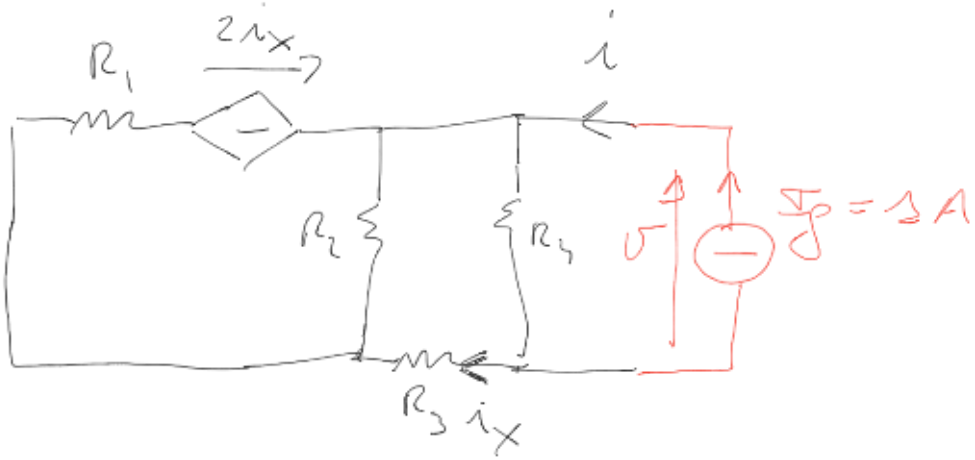


$$R_{eq} = \frac{v}{i}$$



$$v = R_{eq} i$$

GENERATORE DI PROVA (DI CORRENTE)



APPLICO NODI O ANELLI E CALCOLO v.

$$R_{eq} = \frac{v}{1}$$

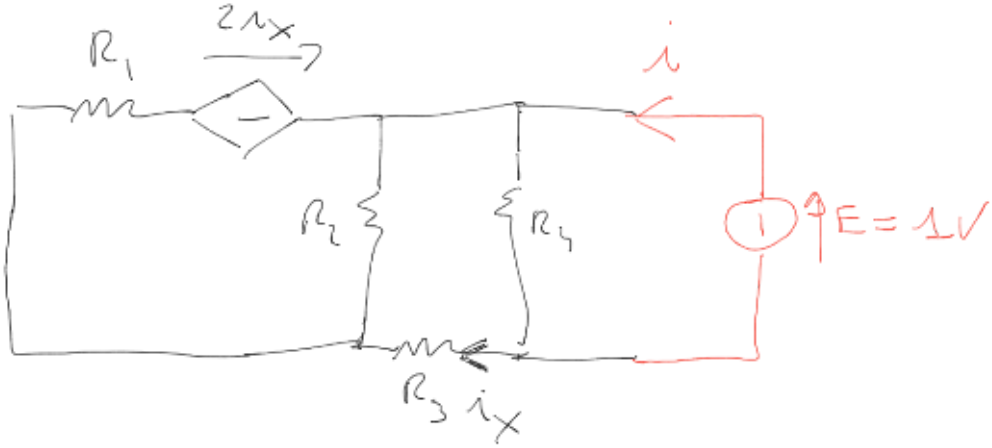
1 2

SE AD ESEMPIO MI VIENE $v = 18\,V$ ALLORA

$$18 = R_{eq} \cdot 1$$

$$R_{eq} = 18\,\Omega$$

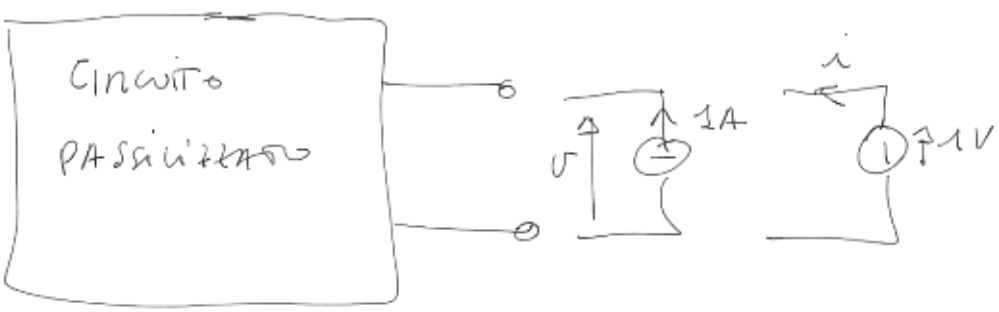
GENERATORE DI PROVA (DI TENSIONE)



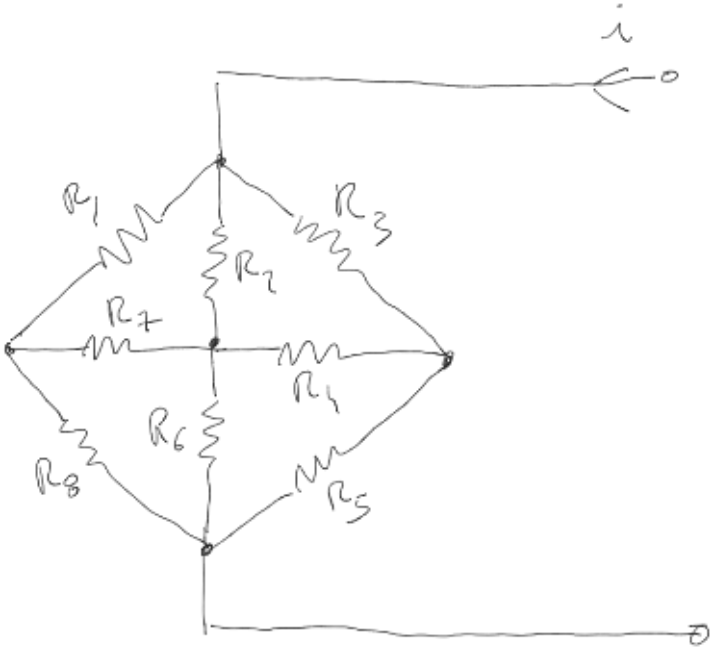
QUESTA VOLTA MI CALCOLO LA CORRENTE i

$$R_{eq} = \frac{E}{i} = 18\,\Omega$$

QUINDI IN GENERALE:

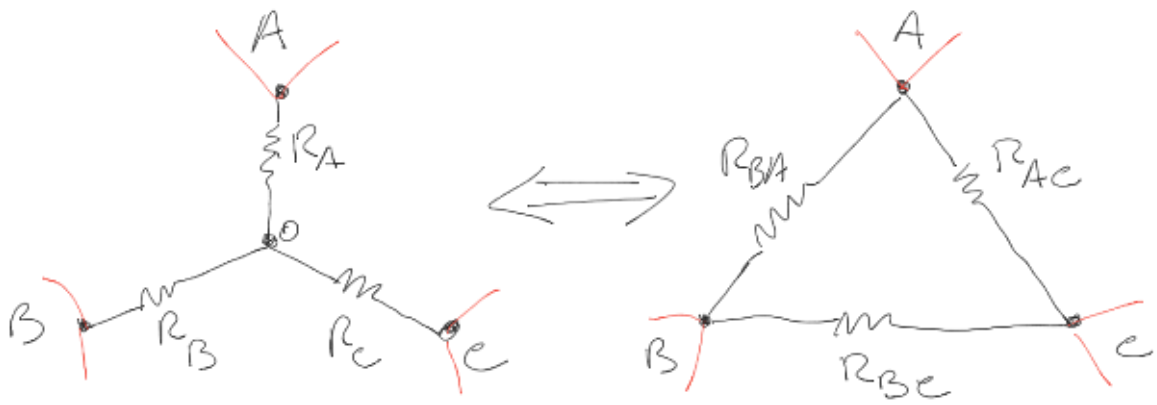


UN ALTRO CASO IN CUI DEVO UTILIZZARE IL GENERATORE DI PROVA È QUANDO NON HO NESSUNA CONFIGURAZIONE SERIE O PARALLELO TRA RESISTENZE.



$$V = R_{eq} \cdot i$$

UTILIZZO LA TRASFORMAZIONE STELLA-TRIANGOLO



$$R_A = \frac{R_{BA} \cdot R_{AC}}{R_{AB} + R_{AC} + R_{CB}}$$

$$R_B = \frac{R_{BA} R_{BC}}{}$$

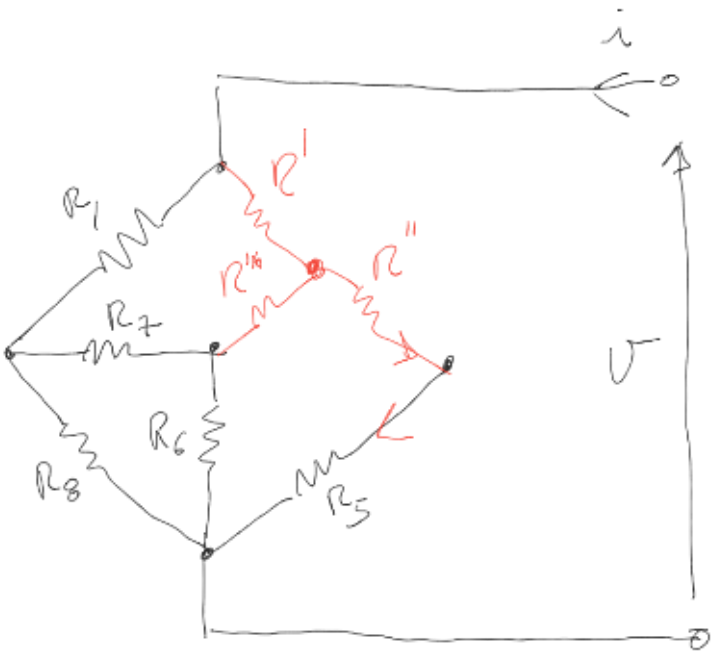
$$R_{BA} = \frac{R_A R_B + R_A R_C + R_C R_B}{R_C}$$

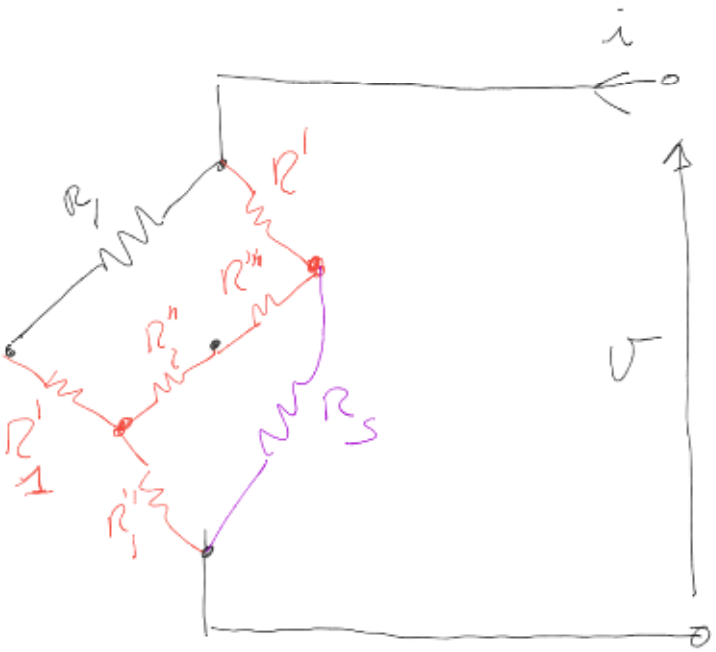
$$R_{AC} = \frac{//}{}$$

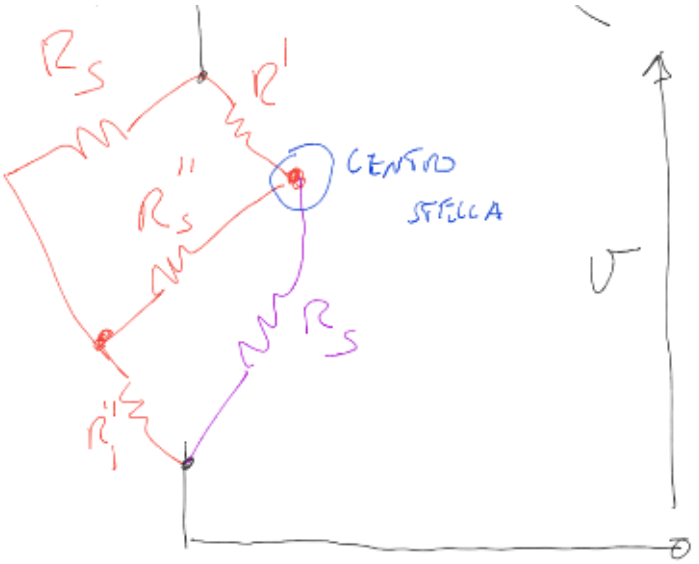
$$R_C = \frac{R_{AC} \cdot R_{BC}}{//}$$

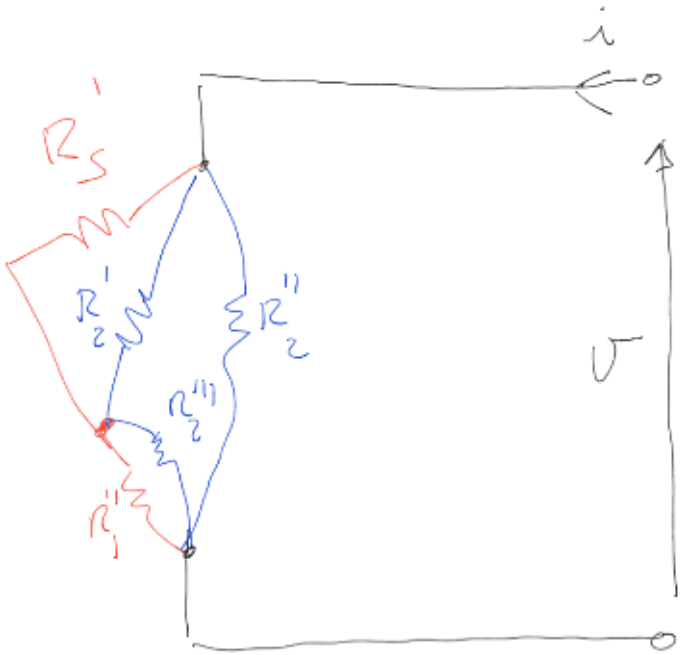
$$R_{BC} = \frac{//}{R_A}$$

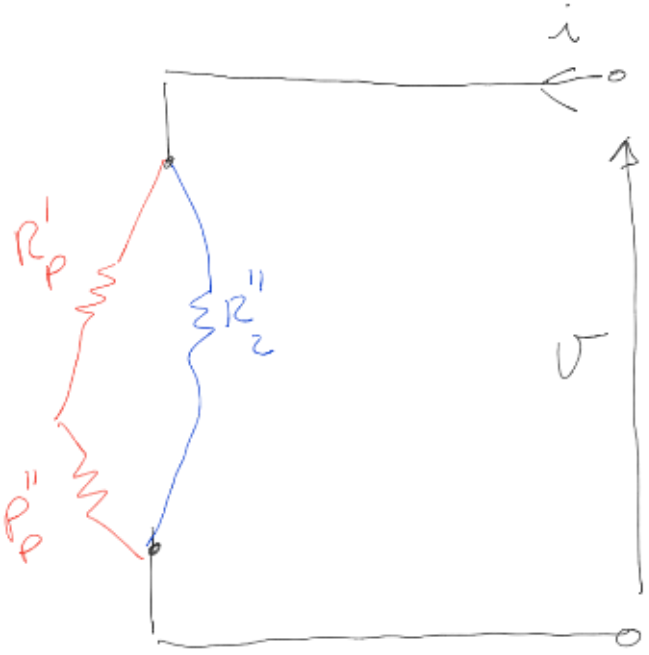
APPLICHIAMO LA TRASF. STELLA-TRIANGOLO











$R_{eq} = (R'_1 + R''_1) // R''_2$

$$r_{eq} = (r_p + r_p) \,//\, r_2$$