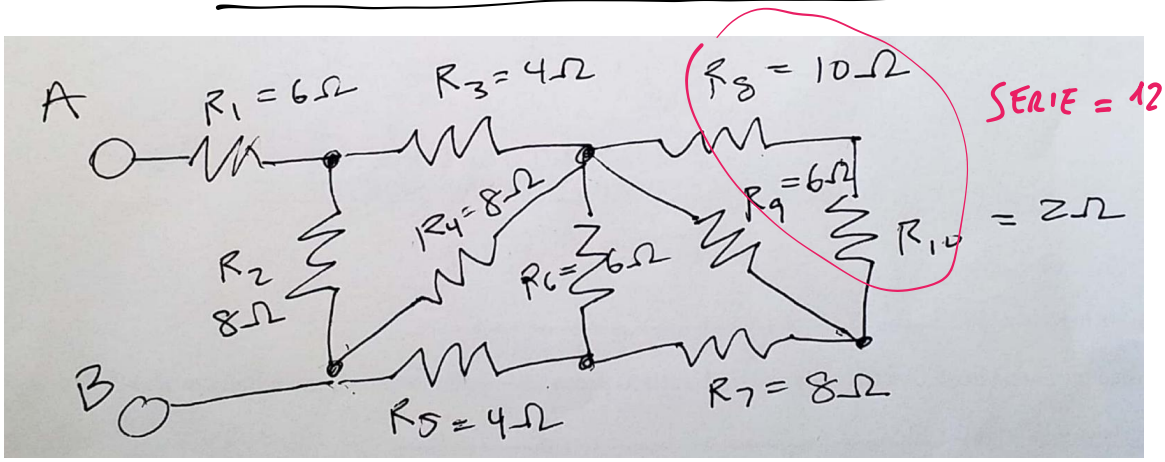
29/1/2019

CALCOLARE LA RESISTENZA EQUIVALENTE

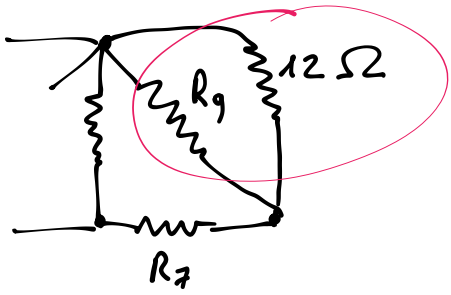


PARALLELO

$$\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2} = \frac{R_1 + R_2}{R_1 R_2}$$

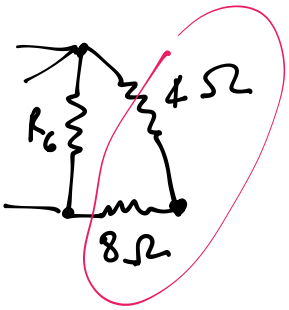
$$\Downarrow$$

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



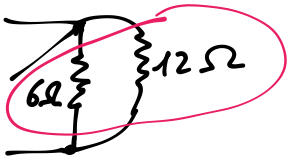
PARALLELO

$$R = \frac{12 \cdot 6}{12 + 6} = \frac{72}{18} = 4\Omega$$



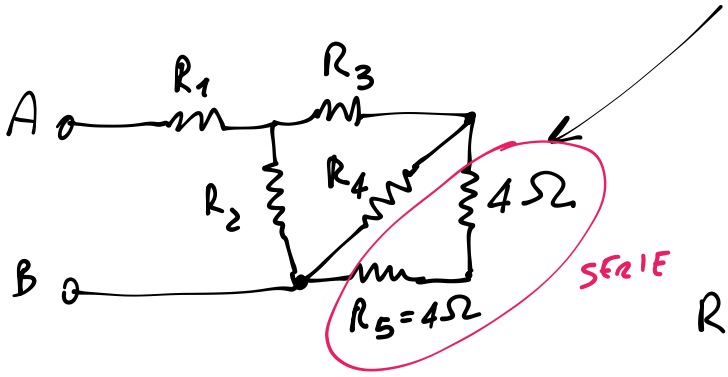
SERIE

$R = 12\Omega$



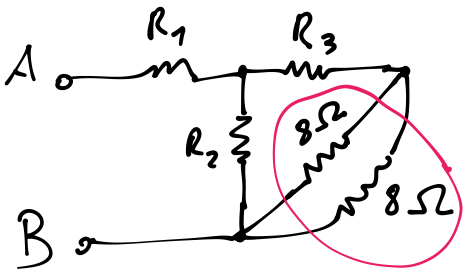
PARALLELO

$R = 4\Omega$



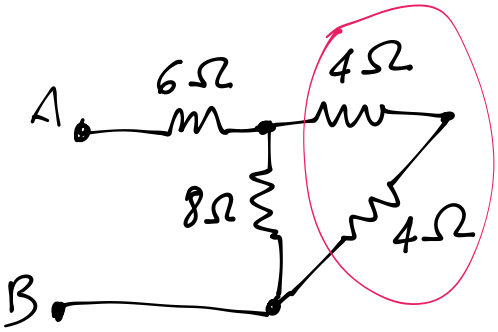
SERIE

$R = 8\Omega$



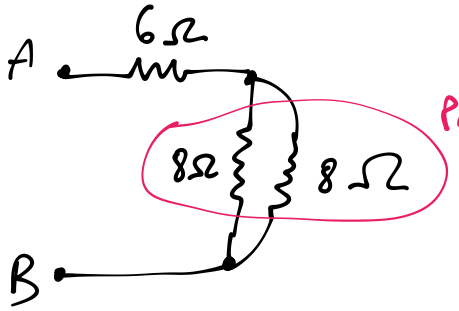
PARALLELO

$$R = \frac{8 \cdot 8}{8 + 8} = 4\Omega$$



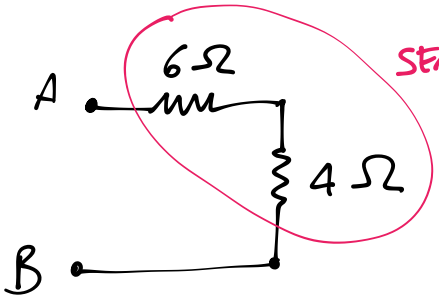
SERIE

$R = 8\,\Omega$



PARALLELO

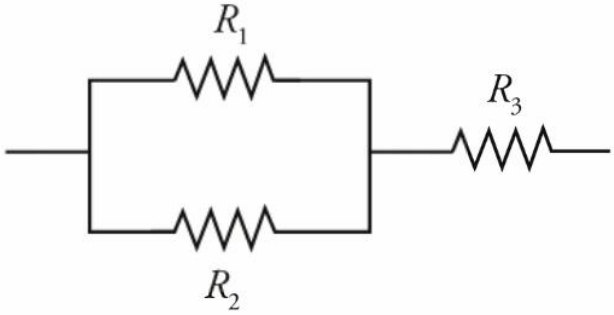
$R = 4\,\Omega$



SERIE

$R_{eq} = 10\,\Omega$

58 ★★ Determina la resistenza equivalente delle tre resistenze rappresentate in figura, sapendo che $R_1 = 50\ \Omega$, $R_2 = 90\ \Omega$, $R_3 = 150\ \Omega$. [182 Ω]

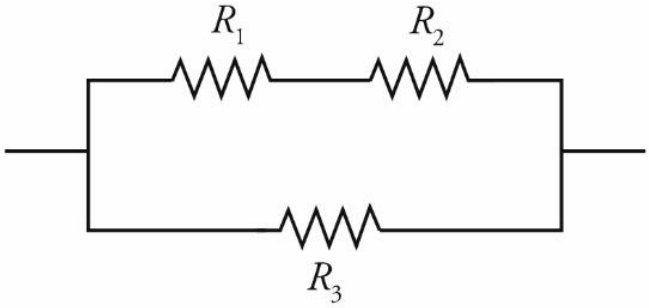


$$R_{eq} = \frac{R_1 \cdot R_2}{R_1 + R_2} + R_3 = \frac{50 \cdot 90}{140}\,\Omega + 150\,\Omega =$$

$$= 32,14\ldots\,\Omega + 150\,\Omega \simeq \boxed{182\,\Omega}$$

R_2

59 ★★ Determina la resistenza equivalente delle tre resistenze rappresentate in figura, sapendo che $R_1 = 50\ \Omega$, $R_2 = 90\ \Omega$, $R_3 = 150\ \Omega$. [72,4 Ω]



$R_1 + R_2 = 140\,\Omega$

↓ in parallelo con $R_3 = 150\,\Omega$

$$R_{eq} = \frac{140 \cdot 150}{140 + 150}\,\Omega = \frac{21000}{290}\,\Omega = 72,41\ldots\,\Omega$$

$$\simeq \boxed{72,4\,\Omega}$$