



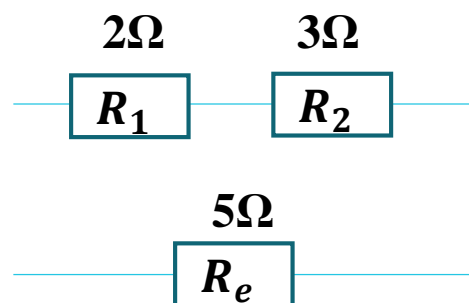
VEZIVANJE OTPORNIKA

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VEZIVANJE OTPORNIKA

Veza otpornika može biti:

Redna



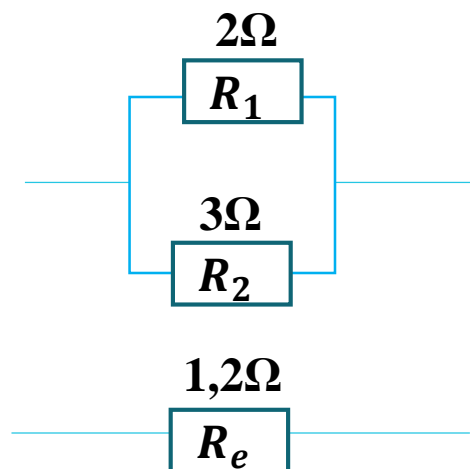
$$R_e = R_1 + R_2$$

$$R_e = 2\Omega + 3\Omega$$

$$R_e = 5\Omega$$

$$R_e = R_1 + R_2 + R_3 \dots$$

Paralelna



$$\frac{1}{R_e} = \frac{1}{R_1} + \frac{1}{R_2} = \frac{1}{2\Omega} + \frac{1}{3\Omega}$$

$$\frac{1}{R_e} = \frac{3}{6\Omega} + \frac{2}{6\Omega}$$

$$\frac{1}{R_e} = \frac{5}{6\Omega}$$

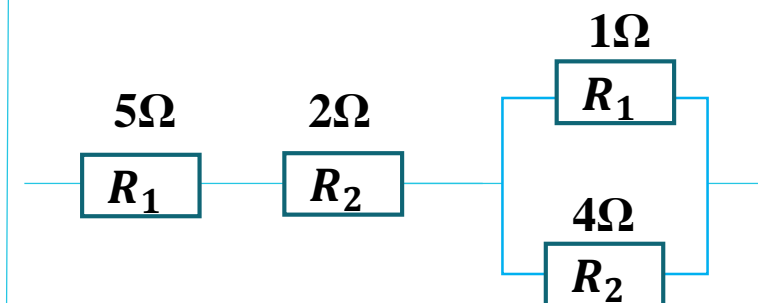
$$5 \cdot R_e = 6\Omega$$

$$R_e = \frac{6\Omega}{5}$$

$$R_e = 1,2\Omega$$

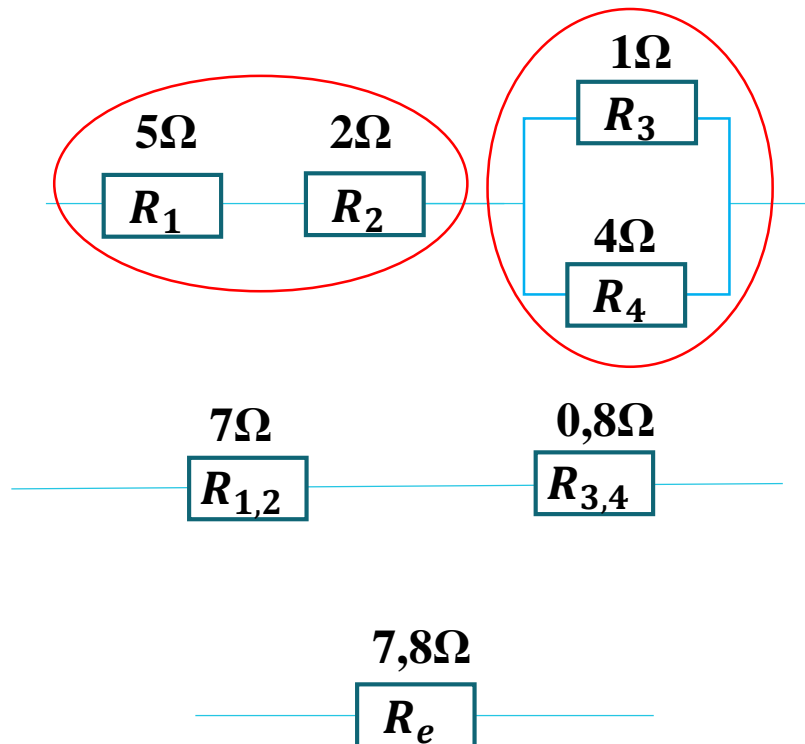
$$\frac{1}{R_e} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} \dots$$

Kombinovana (mešovita)



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Kombinovana (mešovita)



$$R_{1,2} = R_1 + R_2$$

$$R_{1,2} = 5\Omega + 2\Omega$$

$$R_{1,2} = 7\Omega$$

$$\frac{1}{R_{3,4}} = \frac{1}{R_3} + \frac{1}{R_4}$$

$$\frac{1}{R_{3,4}} = \frac{1}{1\Omega} + \frac{1}{4\Omega}$$

$$\frac{1}{R_{3,4}} = \frac{4}{4\Omega} + \frac{1}{4\Omega}$$

$$\frac{1}{R_{3,4}} = \frac{5}{4\Omega}$$

$$5 \cdot R_{3,4} = 4\Omega$$

$$R_{3,4} = \frac{4\Omega}{5}$$

$$R_{3,4} = 0,8\Omega$$

$$R_e = R_{1,2} + R_{3,4}$$

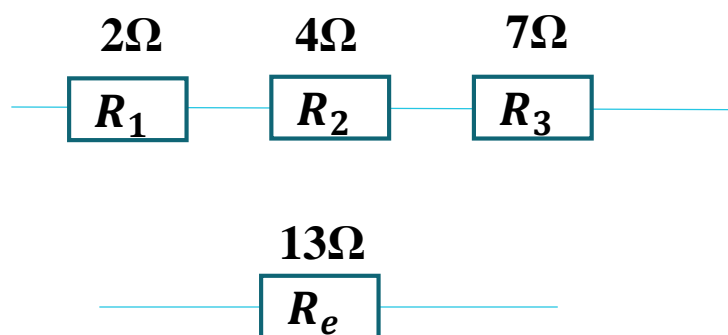
$$R_e = 7\Omega + 0,8\Omega$$

$$R_e = 7,8\Omega$$

VEZIVANJE OTPORNIKA

PRVI PRIMER

Tri otpornika otpornosti 2Ω , 4Ω i 7Ω vezani su redno. Izračunaj ekvivalentni otpor.



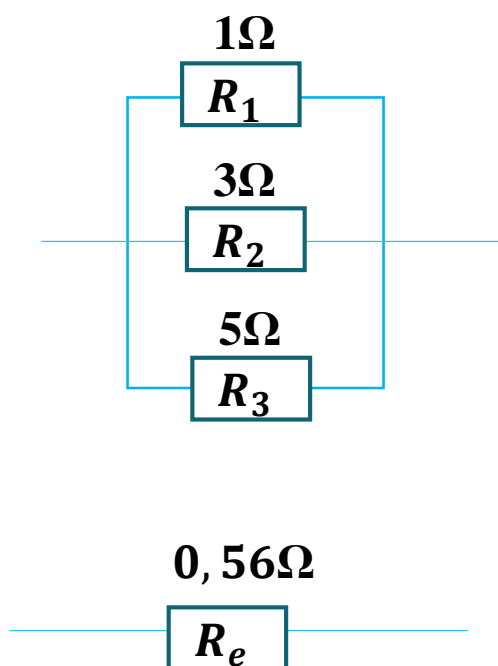
$$R_e = R_1 + R_2 + R_3$$

$$R_e = 2\Omega + 4\Omega + 7\Omega$$

$$R_e = 13\Omega$$

DRUGI PRIMER

Tri otpornika otpornosti 1Ω , 3Ω i 5Ω vezani su paralelno. Izračunaj ekvivalentni otpor.



$$\frac{1}{R_e} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

$$\frac{1}{R_e} = \frac{1}{1\Omega} + \frac{1}{3\Omega} + \frac{1}{5\Omega}$$

$$\frac{1}{R_e} = \frac{15}{15\Omega} + \frac{5}{15\Omega} + \frac{3}{15\Omega}$$

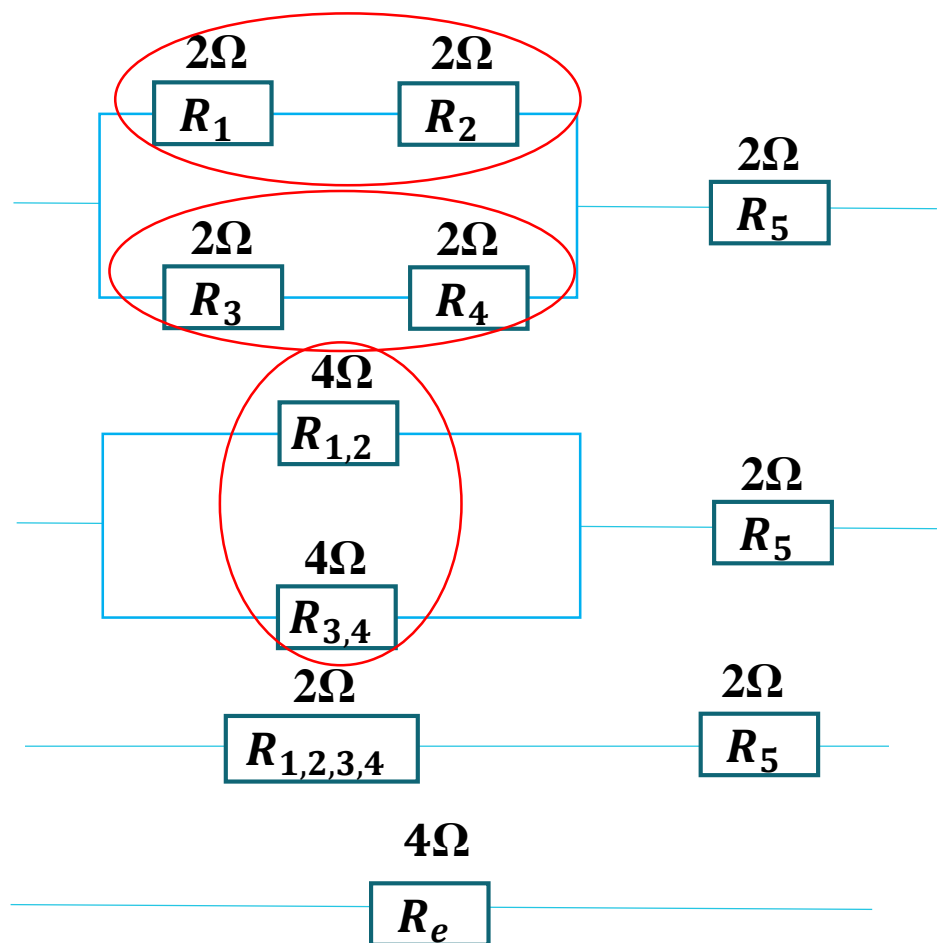
$$\frac{1}{R_e} = \frac{23}{15\Omega}$$

$$23 \cdot R_e = 15\Omega$$

$$R_e = \frac{15\Omega}{23} = \frac{15}{23}\Omega \approx 0,56\Omega$$

TREĆI PRIMER

Pet otpornika svaki od po 2Ω vezani su kao na slici. Koliki je ekvivalentni otpor?



$$R_{1,2} = R_1 + R_2 = 2\Omega + 2\Omega = 4\Omega$$

$$R_{3,4} = R_3 + R_4 = 2\Omega + 2\Omega = 4\Omega$$

$$\frac{1}{R_{1,2,3,4}} = \frac{1}{R_{1,2}} + \frac{1}{R_{3,4}} = \frac{1}{4\Omega} + \frac{1}{4\Omega}$$

$$\frac{1}{R_{1,2,3,4}} = \frac{2}{4\Omega}$$

$$2 \cdot R_{1,2,3,4} = 4\Omega$$

$$R_{1,2,3,4} = \frac{4\Omega}{2} = 2\Omega$$

$$R_e = R_{1,2,3,4} + R_5 = 2\Omega + 2\Omega = 4\Omega$$