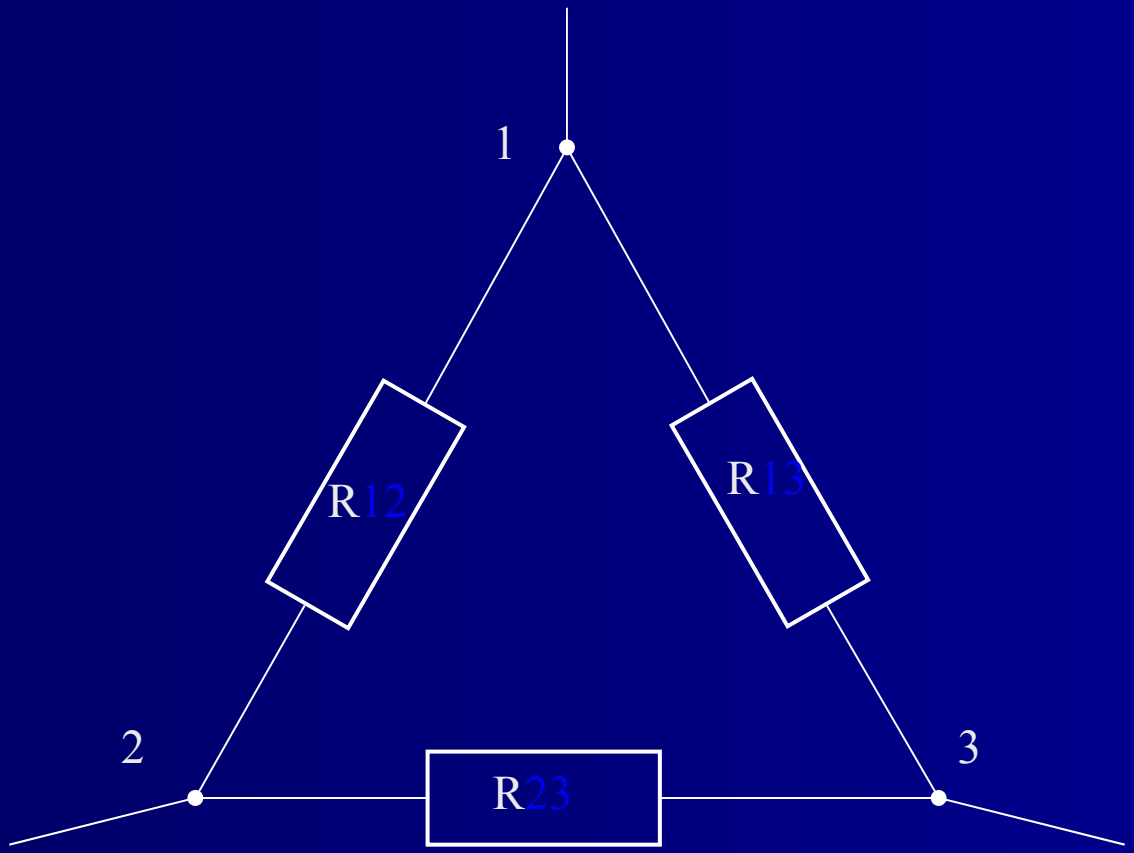
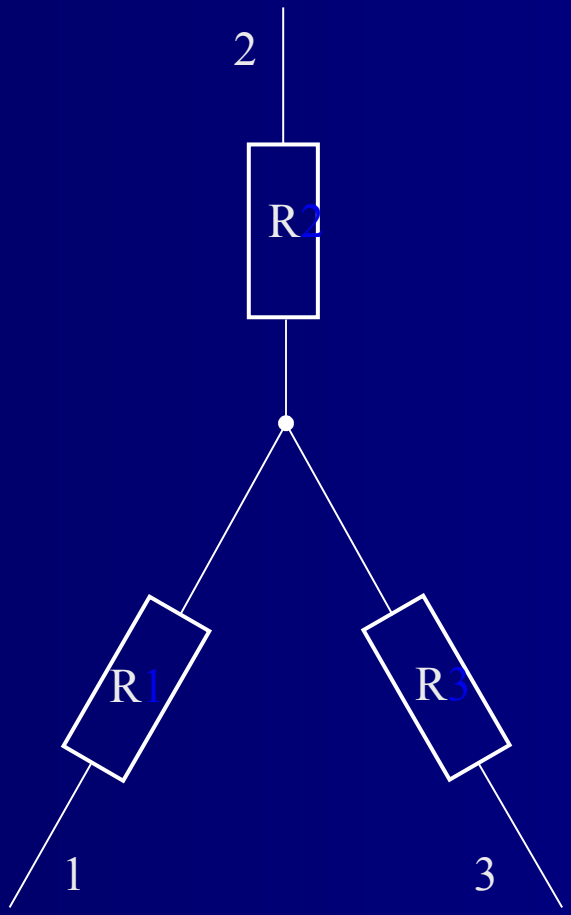
Ćwiczenie 8

Określ zależność między oporami łączonymi w gwiazdę i trójkąt między punktami 1, 2, 3

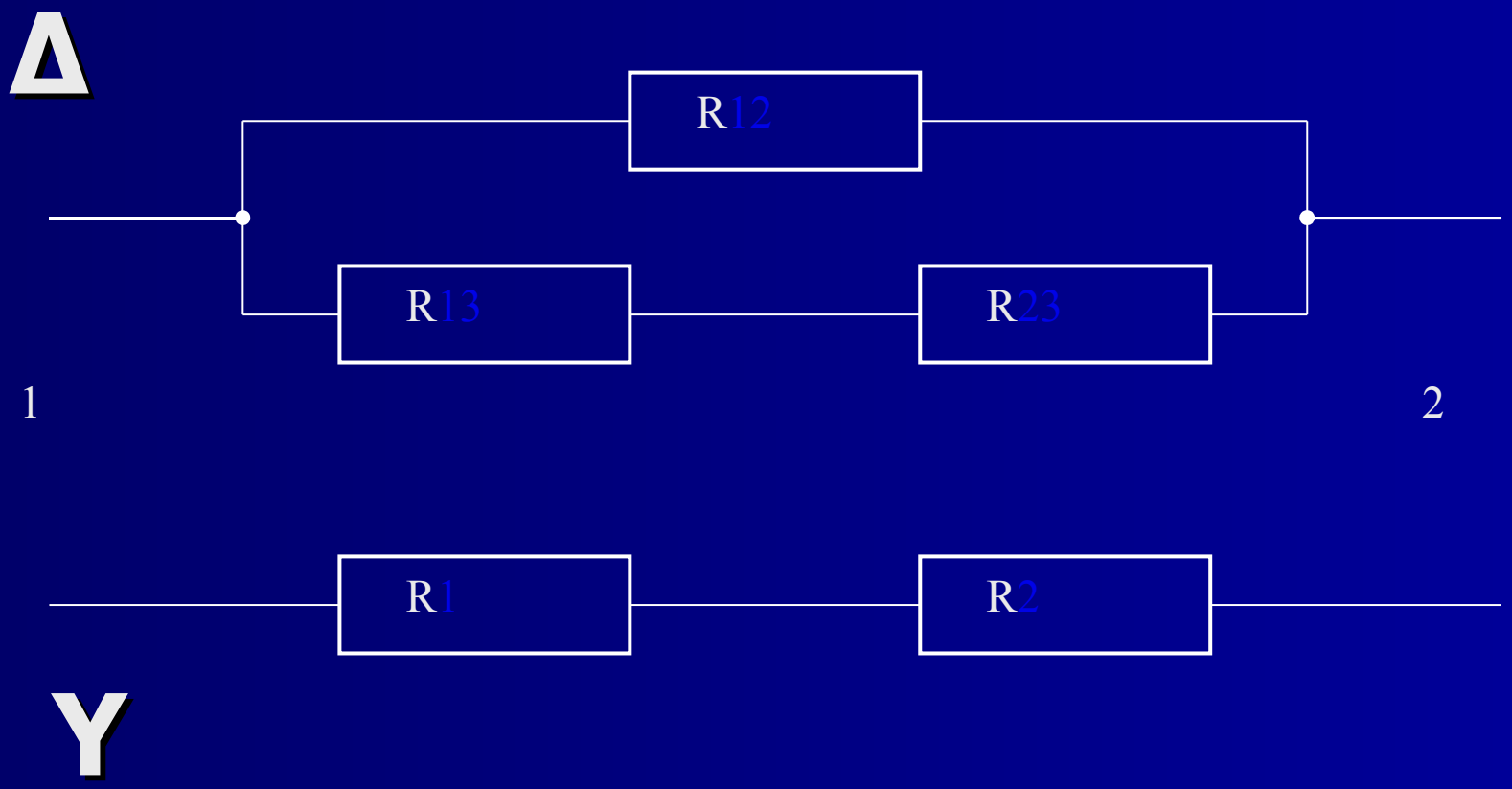
Ćwiczenie 8



Ćwiczenie 8



Ćwiczenie 8



Ćwiczenie 8

punkty $1-2$

$$Y \rightarrow \quad R_z = R_1 + R_2$$

$$\Delta \rightarrow \quad \frac{1}{R_z} = \frac{1}{R_{12}} + \frac{1}{R_{23} + R_{13}}$$

$$\frac{1}{R_z} = \frac{R_{12} + R_{23} + R_{13}}{R_{12} \bullet R_{23} + R_{12} \bullet R_{13}}$$

$$R_1 + R_2 = \frac{R_{12} \bullet R_{23} + R_{12} \bullet R_{13}}{R_{12} + R_{23} + R_{13}}$$

Ćwiczenie 8

$$R_1 + R_2 = \frac{R_{12} \bullet R_{23} + R_{12} \bullet R_{13}}{R_{12} + R_{23} + R_{13}}$$

$$R_1 + R_3 = \frac{R_{13} \bullet R_{23} + R_{13} \bullet R_{12}}{R_{12} + R_{23} + R_{13}}$$

$$R_3 + R_2 = \frac{R_{23} \bullet R_{12} + R_{23} \bullet R_{13}}{R_{12} + R_{23} + R_{13}}$$

Ćwiczenie 8

$$R_1 = \frac{R_{12} \cdot R_{23} + R_{12} \cdot R_{13}}{R_{12} + R_{23} + R_{13}} - R_2$$

$$R_3 = \frac{R_{13} \cdot R_{23} + R_{13} \cdot R_{12}}{R_{12} + R_{23} + R_{13}} - R_1$$

$$R_3 = \frac{R_{23} \cdot R_{12} + R_{23} \cdot R_{13}}{R_{12} + R_{23} + R_{13}} - R_2$$

Ćwiczenie 8

$$R_1 = \frac{R_{12} \cdot R_{23} + R_{12} \cdot R_{13}}{R_{12} + R_{23} + R_{13}} - R_2$$

$$R_3 = \frac{R_{13} \cdot R_{23} + R_{13} \cdot R_{12}}{R_{12} + R_{23} + R_{13}} - \frac{R_{12} \cdot R_{23} + R_{12} \cdot R_{13}}{R_{12} + R_{23} + R_{13}} + R_2$$

$$R_3 = \frac{R_{13} \cdot R_{23} - R_{12} \cdot R_{23}}{R_{12} + R_{23} + R_{13}} + R_2$$

Ćwiczenie 8

$$R_3 = \frac{R_{13} \cdot R_{23} - R_{12} \cdot R_{23}}{R_{12} + R_{23} + R_{13}} + R_2$$

$$R_3 = \frac{R_{23} \cdot R_{12} + R_{23} \cdot R_{13}}{R_{12} + R_{23} + R_{13}} - R_2$$

$$2 \cdot R_2 = \frac{R_{23} \cdot R_{12} + R_{23} \cdot R_{13}}{R_{12} + R_{23} + R_{13}} - \frac{R_{13} \cdot R_{23} - R_{12} \cdot R_{23}}{R_{12} + R_{23} + R_{13}}$$

Ćwiczenie 8

$$2 \cdot R_2 = \frac{R_{23} \cdot R_{12} + R_{23} \cdot R_{13}}{R_{12} + R_{23} + R_{13}} - \frac{R_{13} \cdot R_{23} - R_{12} \cdot R_{23}}{R_{12} + R_{23} + R_{13}}$$

$$R_2 = \frac{R_{23} \cdot R_{12}}{R_{12} + R_{23} + R_{13}}$$

Ćwiczenie 8

$$R_2 = \frac{R_{23} \bullet R_{12}}{R_{12} + R_{23} + R_{13}}$$

$$R_1 = \frac{R_{13} \bullet R_{12}}{R_{12} + R_{23} + R_{13}}$$

$$R_3 = \frac{R_{23} \bullet R_{13}}{R_{12} + R_{23} + R_{13}}$$