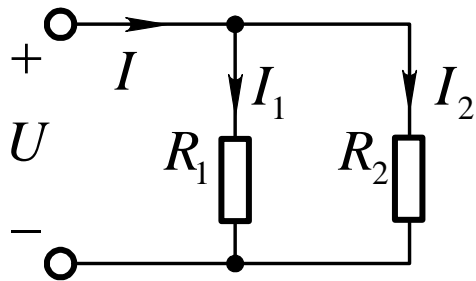电阻的并联：各电阻都接到同一对节点之间，从而各电阻承受相同电压。

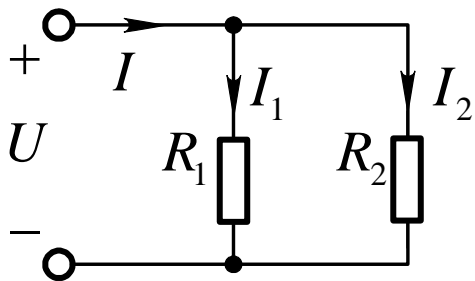$$I = I_1 + I_2 = \frac{U}{R_1} + \frac{U}{R_2} = (G_1 + G_2)U = G_{eq}U$$

$$G_{eq} = G_1 + G_2 \implies G_{eq} = \sum_{k=1}^{N} G_k$$

电阻的并联：各电阻都接到同一对节点之间，从而各电阻承受相同电压。

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

$$\Longrightarrow \quad R_{eq} = \frac{1}{G_{eq}} = \frac{1}{\displaystyle\sum_{k=1}^{N} G_k} = \frac{1}{\displaystyle\sum_{k=1}^{N} \frac{1}{R_k}}$$

并联的应用：电阻的并联常用于分流。
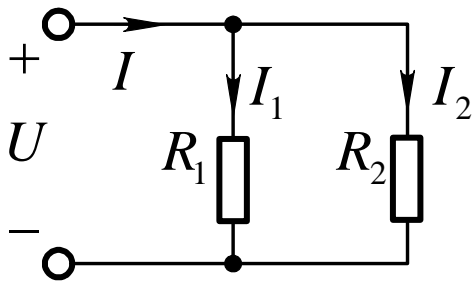
$$I_1 = G_1 U = \frac{G_1}{G_1 + G_2} I = \frac{R_2}{R_1 + R_2} I$$

$$I_2 = G_2 U = \frac{G_2}{G_1 + G_2} I = \frac{R_1}{R_1 + R_2} I$$

$$I_k = G_k U = G_k (R_{\text{eq}} I) = \frac{G_k}{G_{\text{eq}}} I$$

功率分配

$$\left.\begin{aligned} P_1 &= U I_1 = G_1 U^2 \\ P_2 &= U I_2 = G_2 U^2 \end{aligned}\right\} \quad \Longrightarrow \quad \frac{I_1}{I_2} = \frac{P_1}{P_2} = \frac{G_1}{G_2}$$