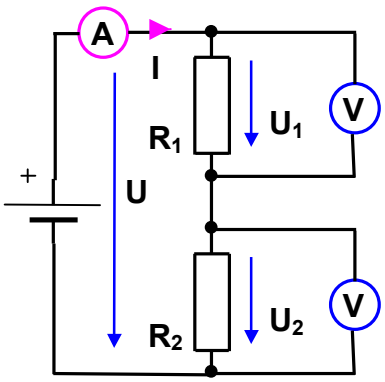
HOF	Elektronik	Name:	
	➔ Parallel- und Reihenschaltung	UE:	Klasse:

Reihenschaltung



➔ **Gesamtwiderstand**

$$R_g = R_1 + R_2$$

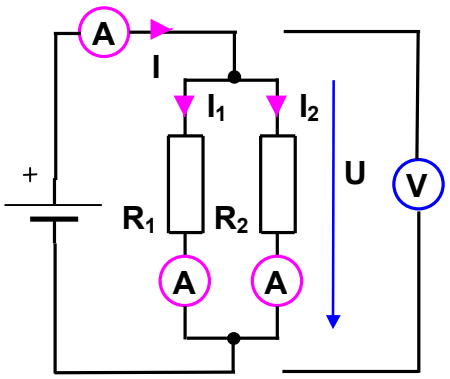
➔ **Spannungen**

$$U = U_1 + U_2$$
$$U_1 = I \cdot R_1$$
$$U_2 = I \cdot R_2$$

Ströme

$$I = \frac{U}{R_g}$$
$$I = \frac{U_1}{R_1} = \frac{U_2}{R_2}$$

Parallelschaltung



➔ **Gesamtwiderstand**

$$R_g = \frac{R_1 \cdot R_2}{R_1 + R_2}$$

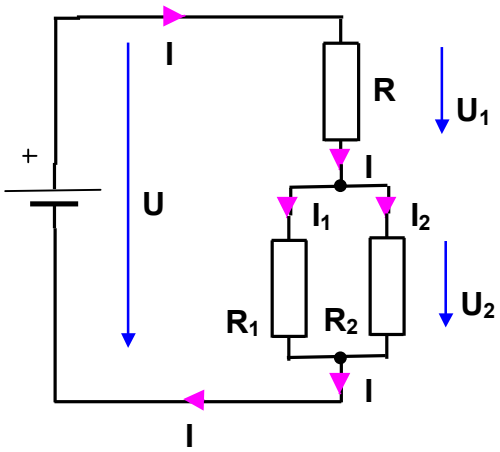
➔ **Ströme**

$$I = I_1 + I_2$$
$$I_1 = I \cdot \frac{R_2}{R_1 + R_2}$$
$$I_2 = I \cdot \frac{R_1}{R_1 + R_2}$$

Spannungen

$$U = I \cdot R_g$$
$$U = I_1 \cdot R_1$$
$$U = I_2 \cdot R_2$$

Gemischte Schaltung



➔ **Gesamtwiderstand**

$$R_g = R + \frac{R_1 \cdot R_2}{R_1 + R_2}$$

➔ **Ströme**

$$I = I_1 + I_2$$
$$I_1 = I \cdot \frac{R_2}{R_1 + R_2}$$
$$I_2 = I \cdot \frac{R_1}{R_1 + R_2}$$

Spannungen

$$U = I \cdot R_g$$
$$U_1 = I \cdot R$$
$$U_2 = I_1 \cdot R_1$$
$$U_2 = I_2 \cdot R_2$$