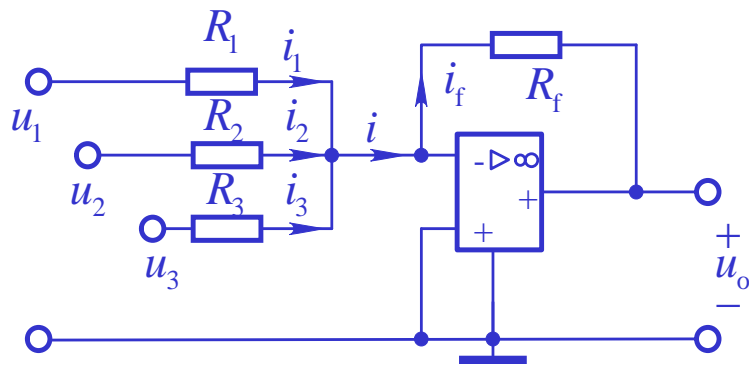## 3. 反相求和运算电路

$$i_1 = \frac{u_1}{R_1}, \quad i_2 = \frac{u_2}{R_2}, \quad i_3 = \frac{u_3}{R_3}$$

$$i_f = i = i_1 + i_2 + i_3$$

$$u_o = -R_f i_f = -\frac{R_f}{R_1}u_1 - \frac{R_f}{R_2}u_2 - \frac{R_f}{R_3}u_3 = k_1 u_1 + k_2 u_2 + k_3 u_3$$

$$若 \ R_1 = R_2 = R_3 = R_f \implies u_o = -u_1 - u_2 - u_3$$