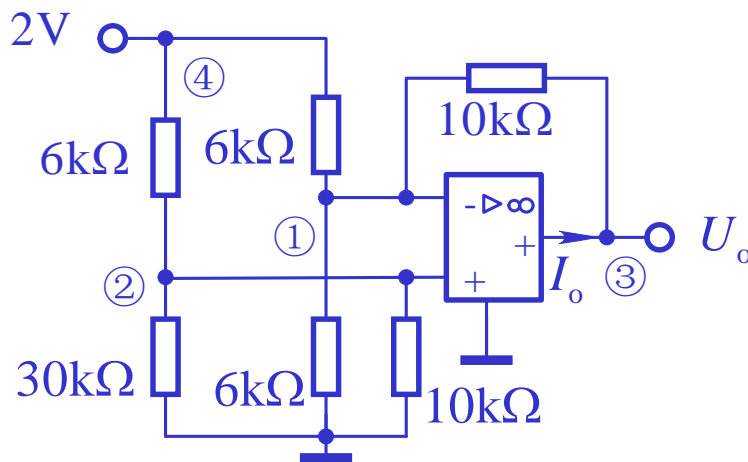


含运算放大器电路的分析

6. 含运放电路的节点电压分析法

$$\left\{ \begin{aligned} \left(\frac{1}{6\text{k}\Omega} + \frac{1}{6\text{k}\Omega} + \frac{1}{10\text{k}\Omega} \right) U_{n1} - \frac{1}{10\text{k}\Omega} U_{n3} &= \frac{2\text{V}}{6\text{k}\Omega} \\ \left(\frac{1}{6\text{k}\Omega} + \frac{1}{30\text{k}\Omega} + \frac{1}{10\text{k}\Omega} \right) U_{n2} &= \frac{2\text{V}}{6\text{k}\Omega} \\ -\frac{1}{10\text{k}\Omega} U_{n1} + \frac{1}{10\text{k}\Omega} U_{n3} - I_o &= 0 \\ U_{n1} &= U_{n2} \end{aligned} \right.$$

$$\Rightarrow \left\{ \begin{aligned} U_{n1} &= U_{n2} = (10/9)\text{V} \\ U_{n3} &= (40/27)\text{V} \end{aligned} \right.$$



如不求此输出电流，则无须对输出节点列KCL方程。