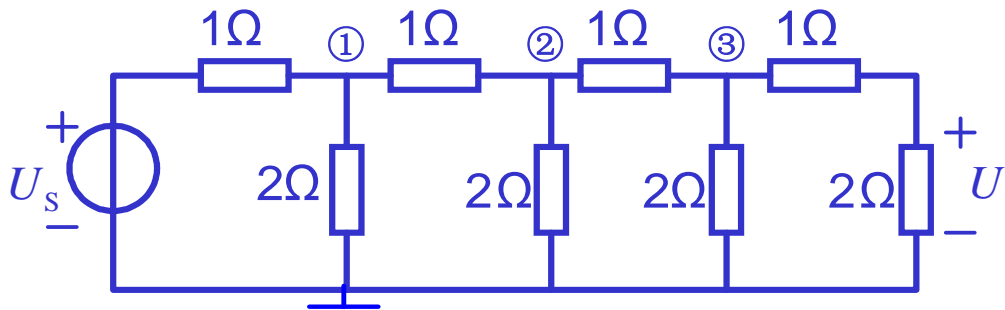


齐性定理

例2 求图示梯形电路的电压 U ，已知 $U_s = 10\text{V}$ 。



解：假设 $U' = 2\text{V}$ ，则 $U'_3 = 3\text{V}$

$$U'_2 = (1 + \frac{3}{2})\text{A} \times 1\Omega + 3\text{V} = \frac{11}{2}\text{V}$$

$$U'_1 = (\frac{5}{2}\text{A} + \frac{5.5\text{V}}{2\Omega}) \times 1\Omega + U'_2 = \frac{43}{4}\text{V}$$

$$U'_s = (\frac{21}{4} + \frac{43}{8})\text{A} \times 1\Omega + U'_1 = \frac{171}{8}\text{V}$$

$$U = \frac{U_s}{U'_s} U' = \frac{10\text{V} \times 2\text{V}}{171\text{V}/8\text{V}} = \frac{160}{171}\text{V} = 0.936\text{V}$$