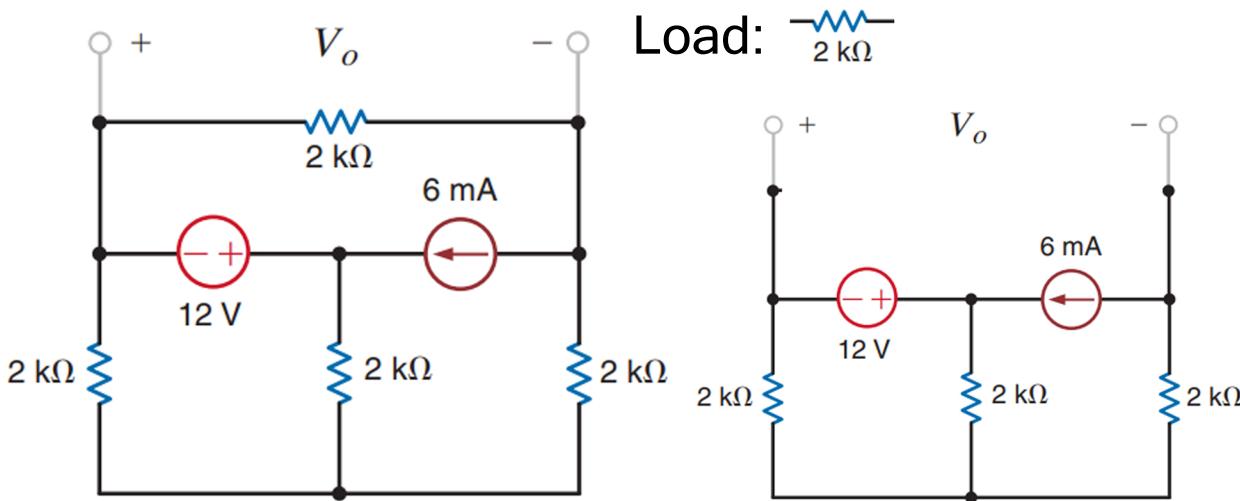


Given: Problem 5.34.

Required: Find V_o using thevenin.

Solution:



V_A :

$$\begin{aligned} \frac{V_A - 0 - 12}{2k\Omega} + \frac{V_A - 0}{2k\Omega} - 6mA &= 0 \\ 2k\Omega \left(\frac{V_A - 0 - 12}{2k\Omega} + \frac{V_A - 0}{2k\Omega} \right) &= 2k(0)\Omega \\ V_A - 12V + V_A - 12V &= 0 \\ 2V_A &= 24V \\ V_A &= 12V \end{aligned}$$

V_{0C} :

$$\begin{aligned} 0 &= V_{0C} - 24V + 12V \\ 12V &= V_{0C} \end{aligned}$$

$$R_{TH} = (2K\Omega || 2K\Omega) + 2K\Omega$$

$$R_{TH} = 3k\Omega$$

$$V_0 = 12 * \frac{2K\Omega}{2K\Omega + 3K\Omega}$$

$$V_0 = 4.8V$$