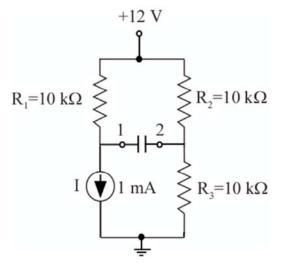
- 1. Given the circuit below:
 - a. Find the effective resistance (Thevenin resistance), seen by the capacitor terminals, R_{12} .
 - b. Determine the Thevenin voltage seen between node 1 and ground, $V_{Th1,0}$.
 - c. Determine the Thevenin voltage seen between node 2 and ground, $V_{Th2,0}$.



- 2. Assume that $\alpha = 0.99$ in the circuit shown below:
 - a. Calculate the voltage gain, $A = \frac{v_{out}}{v_{in}}$.
 - b. Calculate the input resistance seen between the input node and ground, R_{in} .
 - c. Calculate the output resistance seen between the output node and ground, R_{out} .

