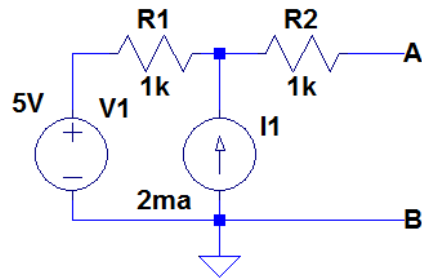
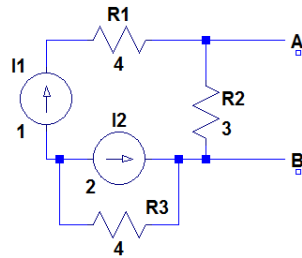


1. A *Norton* equivalent circuit consists of a 5 ma current source in parallel with a 2 K resistor. Draw the *Thevenin* equivalent circuit.

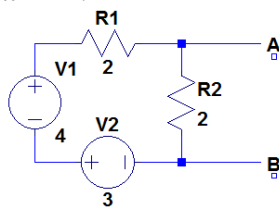
2. Find the Thevenin equivalent circuit at AB for the circuit below:



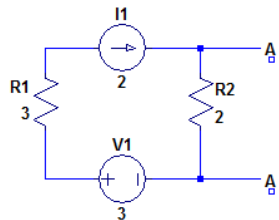
3. Find the Thevenin equivalent circuit for the circuit below at A-B.



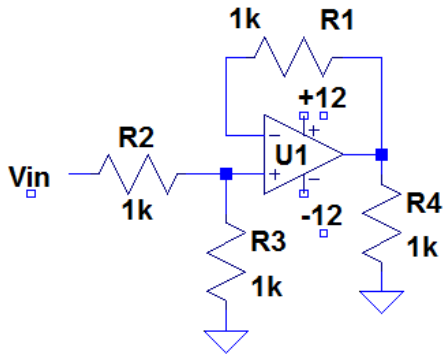
4. Find the Thevenin equivalent circuit for the circuit below at A-B.



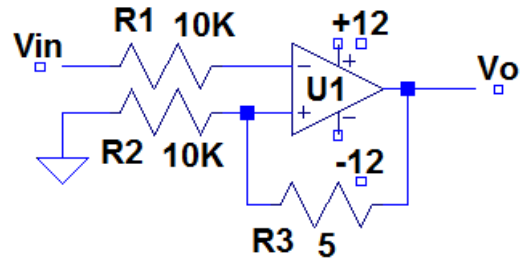
5. Find the Thevenin equivalent circuit for the circuit below at A-B.



6. For each circuit below find the value of V_o if $V_i = 2$ volts.

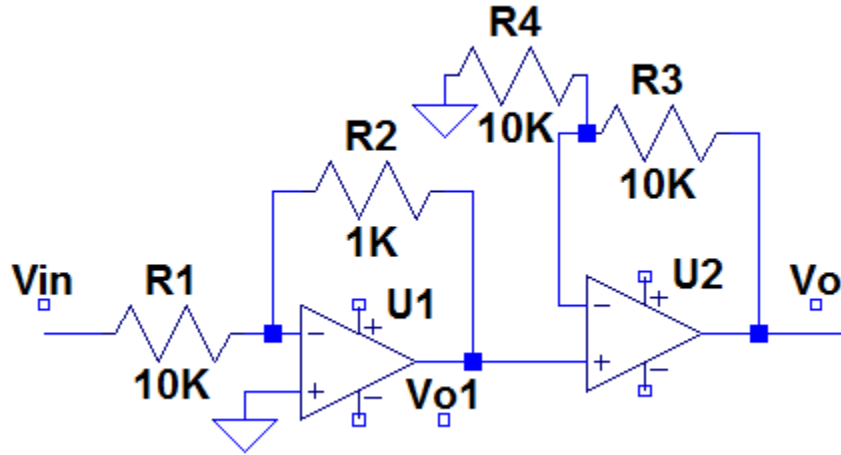


$V_o =$ _____

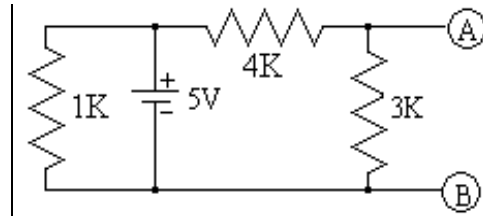


$V_o =$ _____

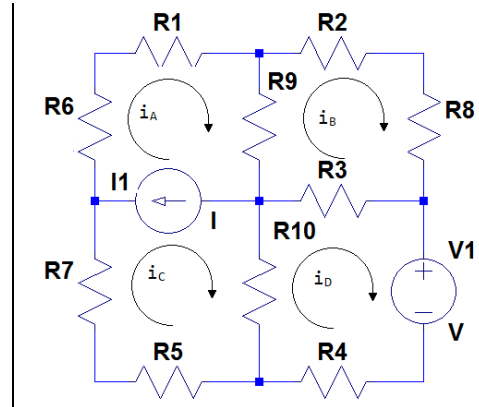
7. Find the relationship between V_o and V_{in} for the circuit below. Assume that both op amps are connected to ± 12 volt power supplies.



8. Use source transformations to replace the circuit below with an equivalent circuit consisting of only an independent current source and a resistor. Find the value of the current source and the resistor and sketch the equivalent circuit.



9. In the circuit below all resistors have a value of 1Ω , the current source is 1 amp and the voltage source is 1 volt. There are four mesh currents labeled i_A to i_D . Write a single equation for the supermesh consisting of resistors $R_1 - R_9 - R_{10} - R_5 - R_7 - R_6$



10. Find the value of I_x

