

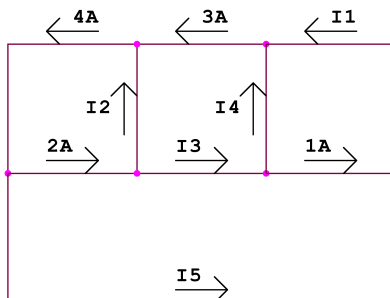
ECE 2350 CIRCUIT ANALYSIS I

Homework 1
21 January 2020

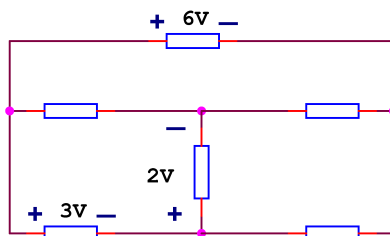
Professor Dunham
Due: 30 January 2020

Review Lecture Notes.

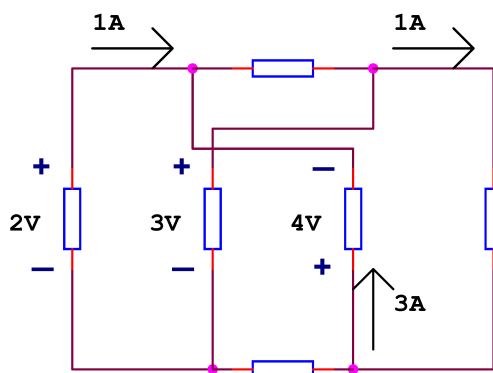
1. In the circuit below find the branch currents I_1 , I_2 , I_3 and I_4 .



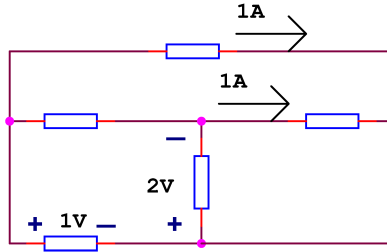
2. In the circuit below find all the remaining branch voltages. Be sure to specify your polarity of the branch voltages that are not labeled in the circuit.



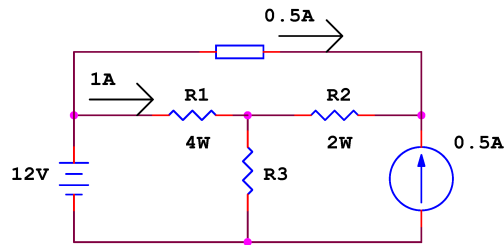
3. Find all remaining branch voltages and currents and verify conservation of power in this circuit. Be sure to provide your polarity of the branch voltages and the direction of current flow for branch currents that are not labeled in the circuit. Note that the wires for the 3 volt and 4 volt branch voltages cross but do not connect since there is no dot at the point of crossing.



4. In the circuit shown assume that the 1 volt branch absorbs 3 watts of power. Find all the unknown branch voltages and currents and verify conservation of power. Be sure to provide your polarity of the branch voltages and the direction of current flow for branch currents that are not labeled in the circuit.



5. In the circuit below find all remaining branch voltages and currents, the resistor values and show conservation of power. Be sure to provide your polarity of the branch voltages and the direction of current flow for branch currents that are not labeled in the circuit.



6. In the circuit below, the 4 Amp current source generates 10 Watts of power. Find all the branch voltages and currents and show conservation of power.

