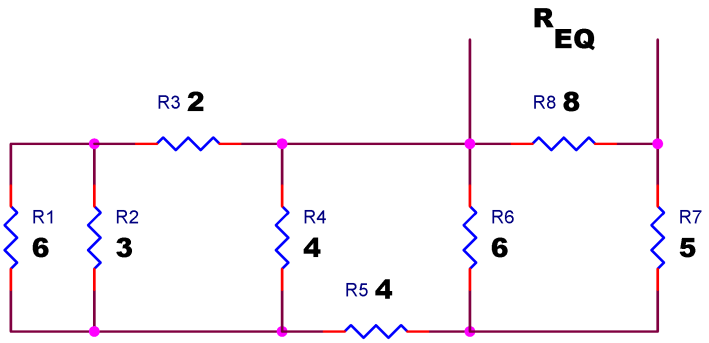
ECE 2350 CIRCUIT ANALYSIS I

Homework 2
28 January 2020

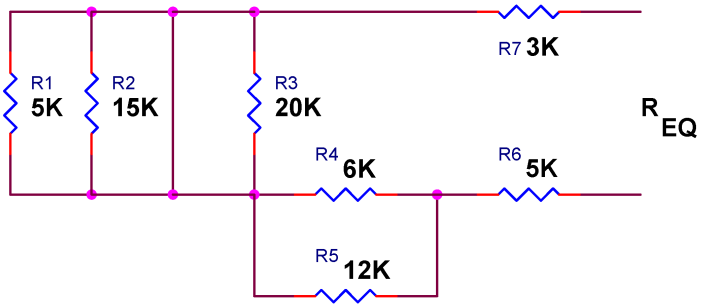
Professor Dunham
Due: 4 February 2020

Review Lecture Notes.

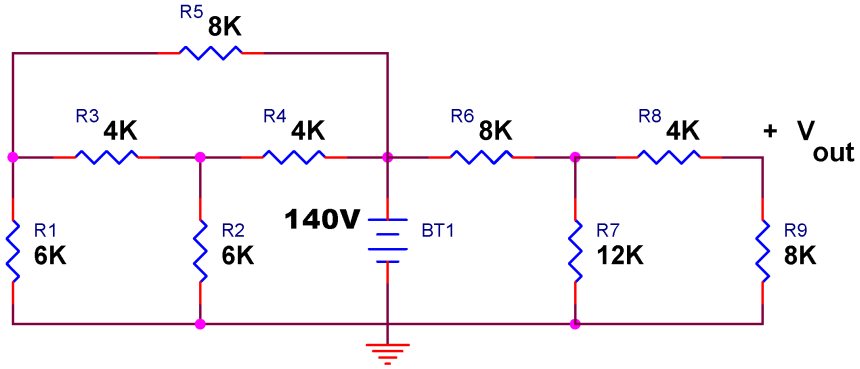
1. Find the equivalent resistance R_{eq} in the circuit below.



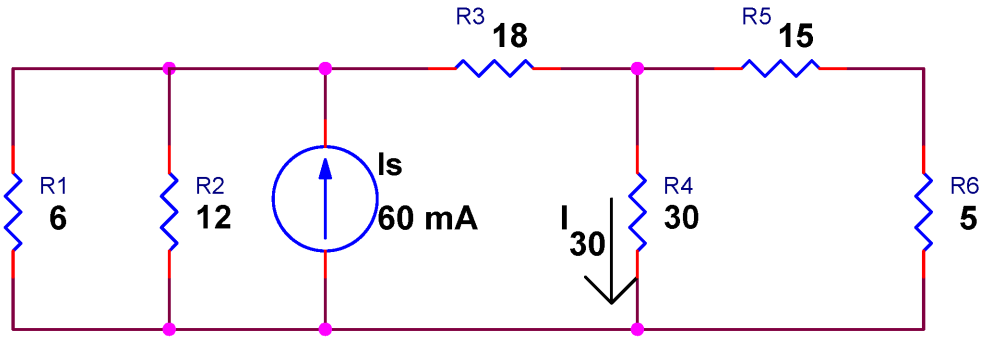
2. Find the equivalent resistance R_{eq} in the circuit below.



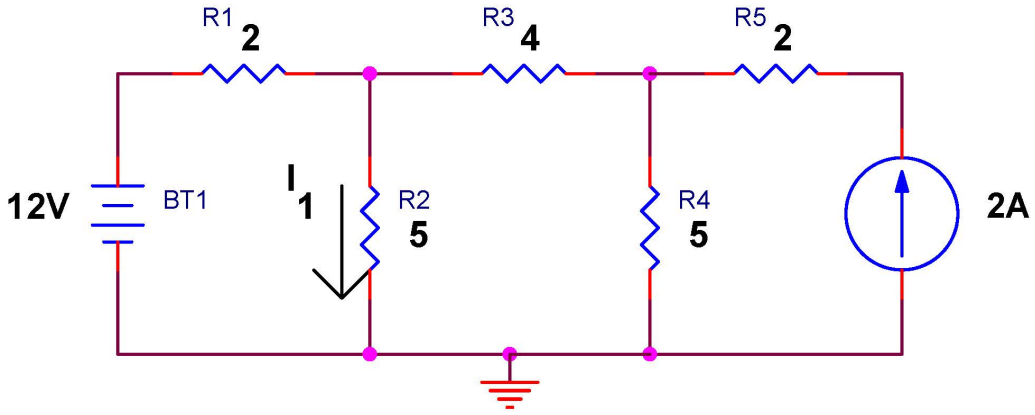
3. Use the voltage divider formula to find the voltage V_{out} in the circuit below. *Hint:* Focus on the relevant part of the circuit to solve the problem.



4. Use the current divider formula to find the current I_{30} in the circuit below.



5. Use a loop analysis method to find current I_1 in the circuit below. Identify all the nodal voltages in the circuit and specify their values using 3 decimal points of accuracy.



6. In the circuit below use a loop analysis to specify the voltage source V_S so that 20 watts of power are dissipated in the 5Ω resistor. Be sure to provide both solutions.