Homework 1

Due: Aug 13, 2021 23:59

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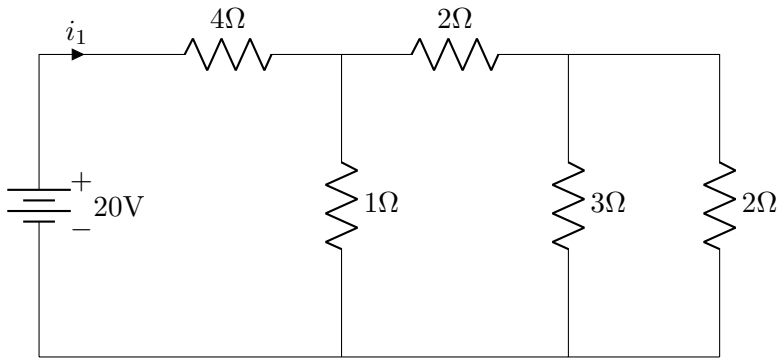
General Instructions:

1. Submit your solutions as a *single PDF file* file through Moodle. Submission via other means will not be accepted. Moodle has file size limits as well as bandwidth limits so please do not leave the task of scanning and uploading to the last minute.
2. You may create the PDF either through LaTeX, Word etc. or scan a clearly / legibly written sheet of paper. Answers that are not legible / readable will marked zero. Please view/check the scanned PDF before you submit it.
3. Please attempt and submit the homework by yourself except where instructions specify group work. If you have questions, comments, doubts about any of the questions please reach out to the TAs or instructor. Do not discuss it with other students until the submission deadline. This will help regulate the pace and content of the course.

Examine the circuit given below and answer the following questions.



1. Assign labels (to components, currents, nodes etc. as required) and redraw / annotate the circuit. (5 points)
2. Write *all* of Kirchoff's node and loop equations for this circuit. (5 points)
3. Calculate the current i_1 (5 points).
4. What is the power dissipated in the 3Ω resistor? (5 points)