Prelab 1 Homework

Phys 276

Spring 2015

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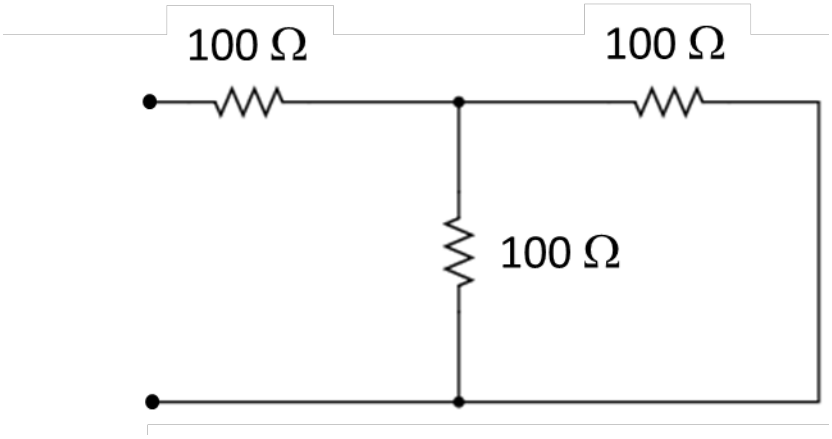
1. Given the following circuit, calculate the equivalent resistance measured between the terminals.



2. A battery has a small but finite internal resistance. This means that some of the voltage that it produces is "dropped" internally and does not appear between the terminals (where the wires exit the dashed box in the diagram). In the case shown below take the EMF of the battery to be 6 V, the internal resistance $R_{INTERNAL}$ = 5 Ω, and the load resistance R_{LOAD} = 50 Ω. Assume the voltmeter has infinite input impedance. What voltage value is measured?