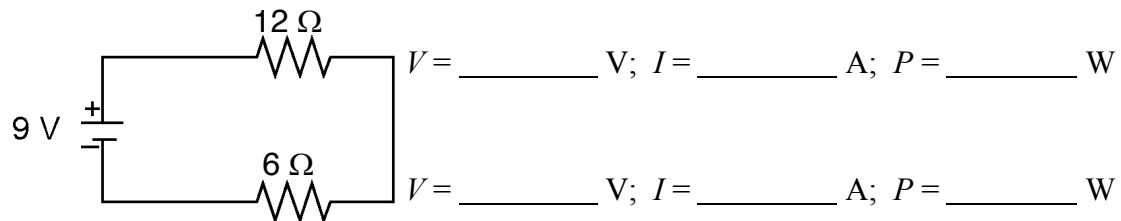
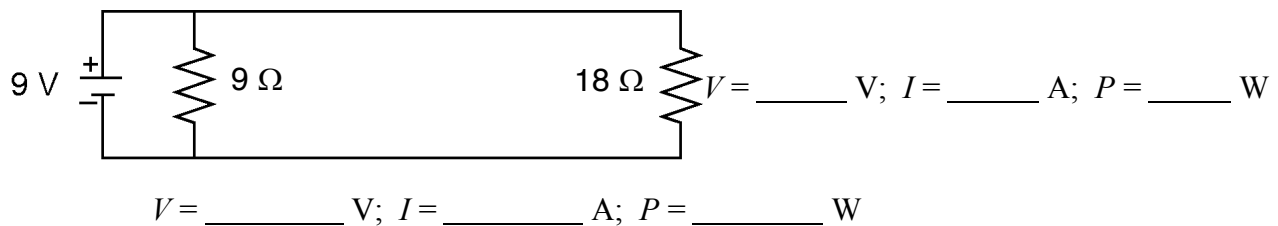

PHYS 1220 Group Work: Resistor Circuits

1. Analyze the following circuits. First, draw arrows to indicate the direction of the current through each resistor. Then determine the voltage drop across each, the current through each, and the power dissipated by each, and fill in the blanks indicated.

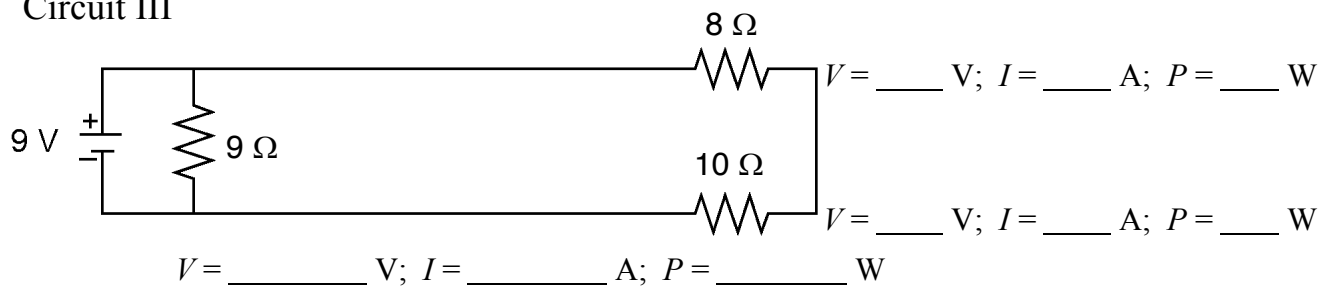
Circuit I



Circuit II



Circuit III



2. Set up systems of linear equations that will enable you to determine the voltages across and currents through the circuits in problem 1.

A. Circuit I

B. Circuit II

C. Circuit III

3. Convert the linear equations into spreadsheets (either three spreadsheets, or three pages in a spreadsheet). Solve the systems of equations. Verify that they return the correct voltages and currents.