

ECE 211 Fall 2003
PSpice Lab One
(Due 10/8/03 at the beginning of discussion.)

Objectives:

In this lab, you will learn how to create simple schematics in PSpice, run a DC bias analysis, and interpret the results.

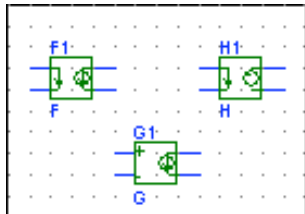
Required Output:

For each problem:

1. Schematic print out with node voltages and currents (from analysis) labeled.
2. Analysis output file (.out text file) for each problem.

Instructions:

1. A PSpice tutorial is available on the course website. Please read the tutorial and try the example it gives before doing anything else. It will make your life much easier.
2. A quick reference is provided below to help you remember key steps after you have completed the tutorial example.
 - a. To get parts for your schematic go to Place → Part.
 - b. To wire parts together, go to Place → Wire.
 - c. To change resistor values, voltages, etc. double click on the part's value.
 - d. To change/view the properties of a part, double click on it.
 - e. To rotate parts, click on the part and go to Edit → Rotate.
 - f. Always ground circuits.
 - g. To simulate circuits go to PSpice → New Simulation Profile.
3. Hint on problem 3: The part names for the different kinds of dependent sources are provided below. Pick the one suitable for this problem. Remember that after the source is wired into your circuit you must also wire in the control voltage or current. We will be adding an example with a dependent source to the tutorial so check back when you get to this.



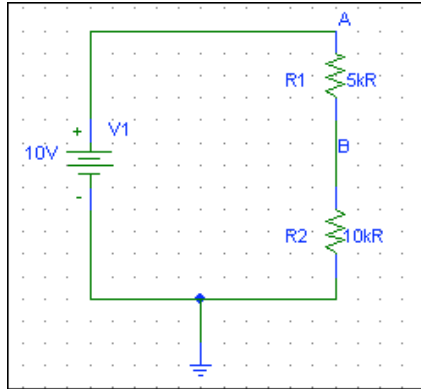
Current-controlled current source (part name F)

Voltage-controlled current source (part name G)

Current-controlled voltage source (part name H)

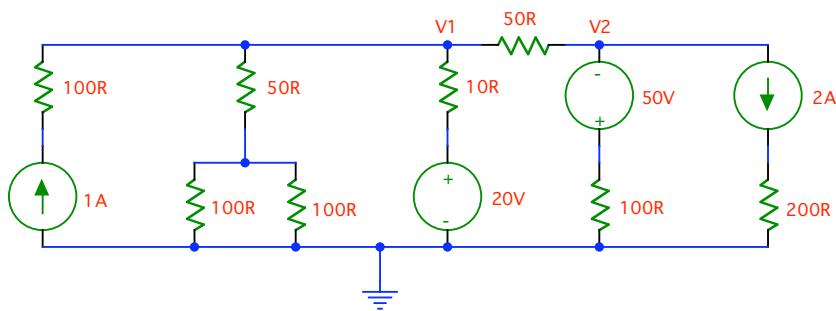
Meenal Bagla is the TA for PSpice. Please see Meenal or Prof. Preston if you have questions.

Problem 1



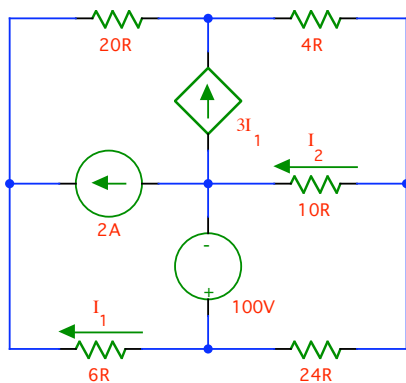
- Find the voltages at node A and B.
- Find the current through the circuit.

Problem 2



- Find the voltages at nodes V1 and V2.

Problem 3



This is problem 4.43 from our book, Engineering Circuit Analysis by Hayt, Kemmerly, and Durbin

- Find the currents I₁ and I₂.