

ECE 109L - EQUIVALENT CIRCUITS - LAB 20

THEVENIN'S THEOREM - PART III

SUMMER 2007

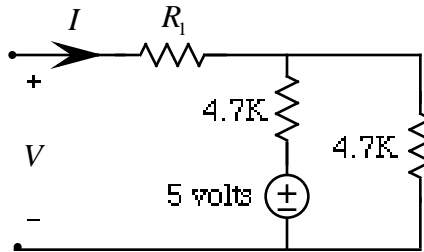
A.P. FELZER

OBJECTIVE

The objective of this Lab is to find and make use of Thevenin Equivalent circuits

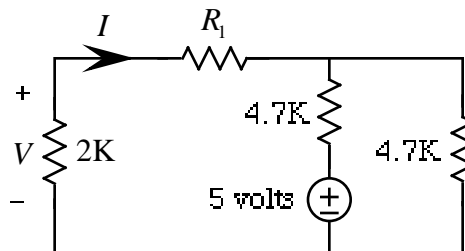
LAB

1. Given the following resistor circuit



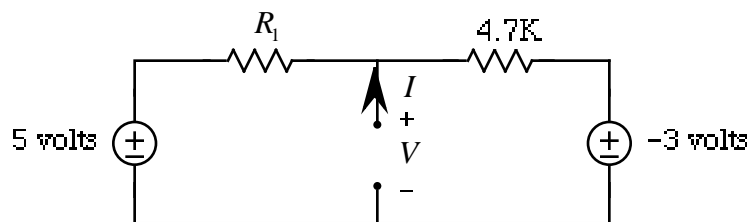
PARTNER 1: $R_1 = 1K$ PARTNER 2: $R_1 = 2K$

- a. Measure your resistor values. Compare with nominal values
- b. **PreLab** - Calculate V_{TH} and R_{TH} for this circuit
- c. Measure V_{TH} and R_{TH} for your circuit. Be sure to draw the corresponding circuits before measuring
- d. Compare the measured and calculated values of V_{TH} and R_{TH}
- e. Draw the Thevenin Equivalent of your circuit
- f. Make use of your Thevenin Equivalent circuit to calculate V when a 2K resistor is connected to the terminals of the actual circuit as follows



- g. Measure V for the circuit in part (f).
- h. Compare your measured and calculated values of V in parts (f) and (g)

2. Repeat Problem (1) for the following circuit



PARTNER 1: $R_1 = 2K$ PARTNER 2: $R_1 = 10K$