

# ECE 109L - NODE ANALYSIS - LAB 16

## NODE EQUATIONS - PART II

SUMMER 2007

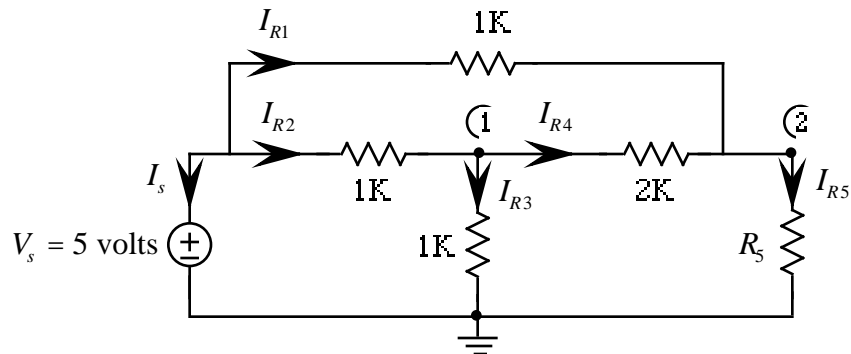
A.P. FELZER

### OBJECTIVE

The objective of this lab is to calculate and measure node voltages in more complicated resistor circuits and then make use of them to calculate the voltages and currents in the rest of the circuit elements

### LAB

1. Given the following circuit



PARTNER 1:  $R_5 = 1K$       PARTNER 2:  $R_5 = 2K$

- Measure your resistor values. Compare with nominal values
- Measure the node voltages  $V_1$  and  $V_2$
- Measure all the circuit currents
- PreLab** - Write and solve the node equations for the node voltages  $V_1$  and  $V_2$  for your resistor values
- Compare your calculated and measured node voltages
- Make use of your calculated node voltages to calculate all the circuit currents including  $I_s$
- Compare your calculated and measured currents