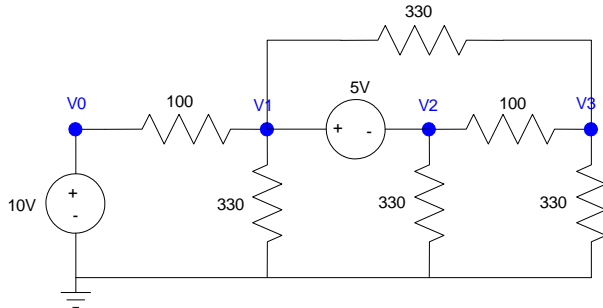


# EE 206: Homework #4

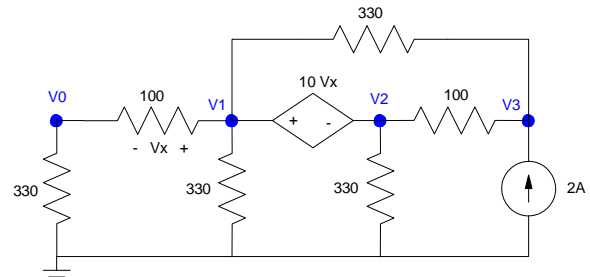
Super Nodes, Current Loops. Due Mon, Feb 4th  
 Note: In this assignment just write N equations for N unknowns.

## Super Nodes

- 1) Write the voltage node equations for the following circuit (N equations for N unknowns)
- 2) Write the voltage node equations for the following circuit (N equations for N unknowns)



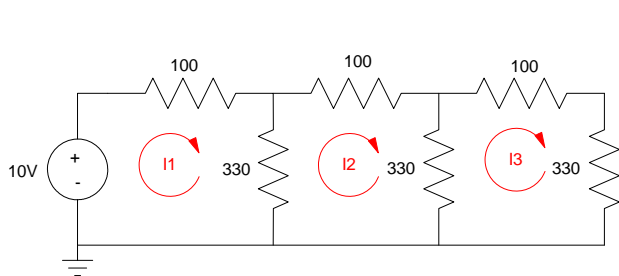
Problem 1



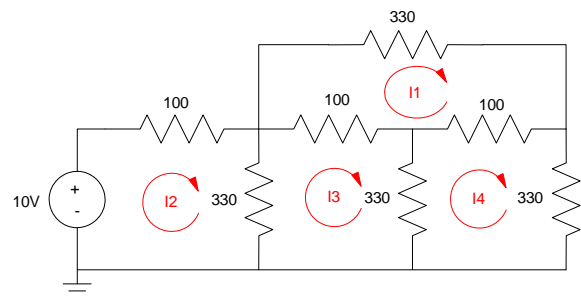
Problem 2

## Current Loops

- 3) Write the current loop equations for the following circuit
- 4) Write the current loop equations for the following circuit



Problem 3



Problem 4

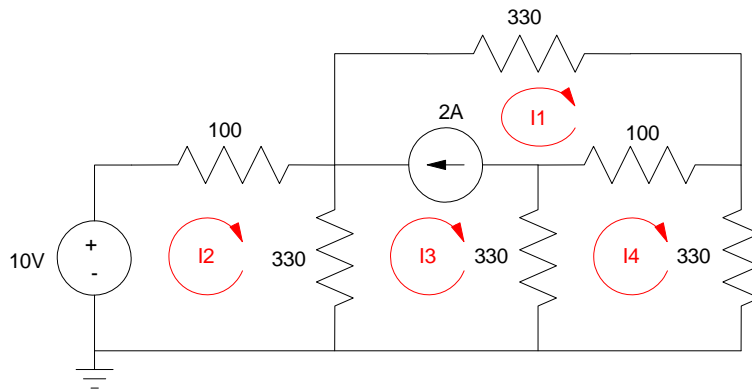
For the circuit of problem #4

- 5) Solve your sets of equations to find the currents.
- 6) Simulate the circuit in PartSim. Check that the simulation results match your calculations.

|    | Calculated<br>problem 5 | Simulated<br>problem 6 |
|----|-------------------------|------------------------|
| I1 |                         |                        |
| I2 |                         |                        |
| I3 |                         |                        |
| I4 |                         |                        |

### Super Loops

7) Write the current loop equations for the following circuit



8) Write the current loop equations for the following circuit

