

Nodal and Mesh Analysis

Name _____

Grade _____/10

Notes

- Round all of your *recorded* results to four significant digits but carry more digits in your intermediate calculations.

Part I

Given the following values:

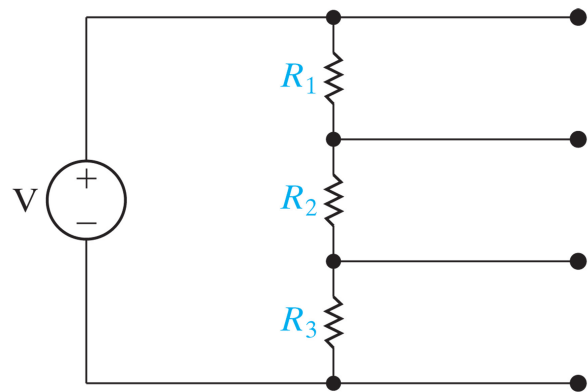
$$V = 8V$$

$$R_1 = 10k\Omega$$

$$R_2 = 20k\Omega$$

$$R_3 = 30k\Omega$$

Use the voltage divider law correctly to calculate the voltage at all circuit nodes (please label).



Part II

For the circuit at the right, calculate the unknown node voltages and the unknown mesh currents. In both cases, calculate V_x .

I_1 _____ mA

I_2 _____ mA

I_3 _____ mA

V_2 _____ V

V_3 _____ V

V_x using mesh currents: _____ V

V_x using node voltages: _____ V

