

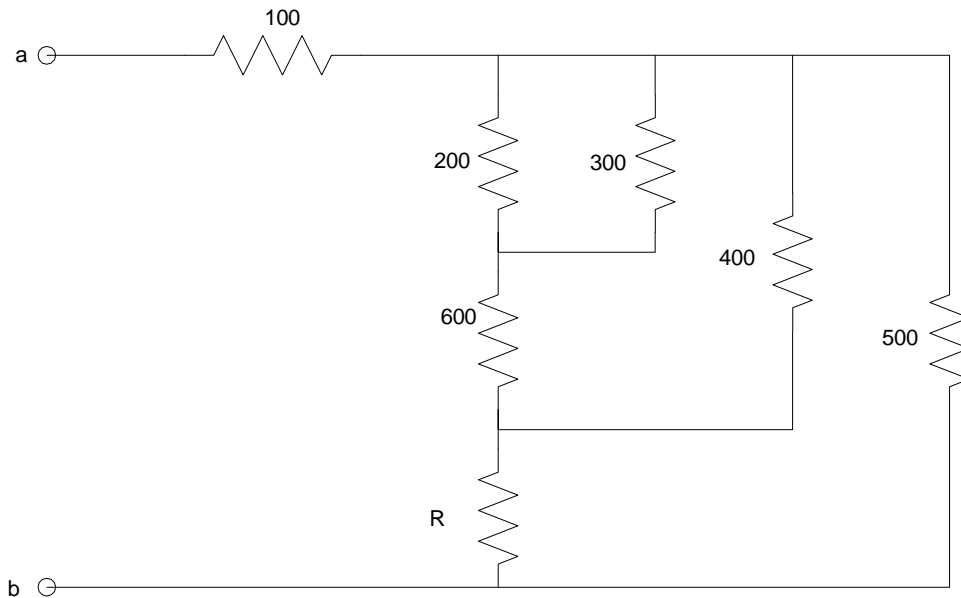
# EE 206: Homework #3

Voltage and Current Division. Voltage Nodes. Due Mon, Feb 3rd

Please make the subject "EE 206 HW#3" if submitting homework electronically to Jacob\_Glower@yahoo.com (or on blackboard)

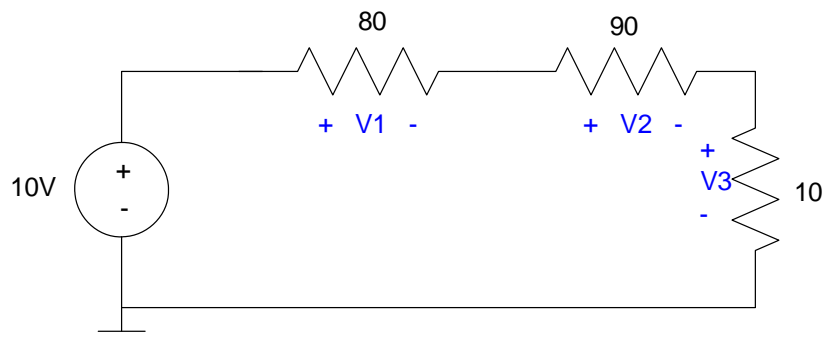
## Resistors in Series and Parallel

- 1) Assume  $R = 100$ . Determine the total resistance,  $R_{ab}$
- 2) Assume the total resistance is  $R_{ab} = 400$  Ohms. Determine  $R$ .

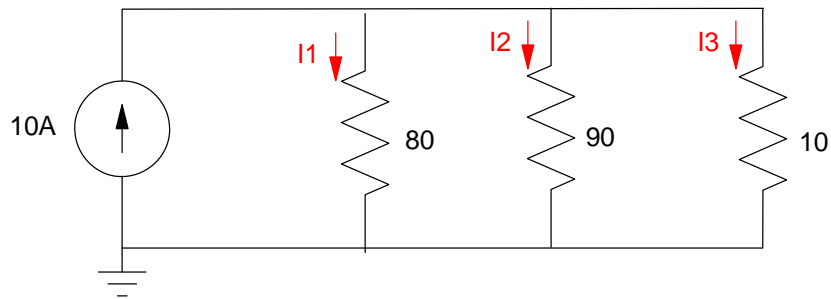


## Voltage Division:

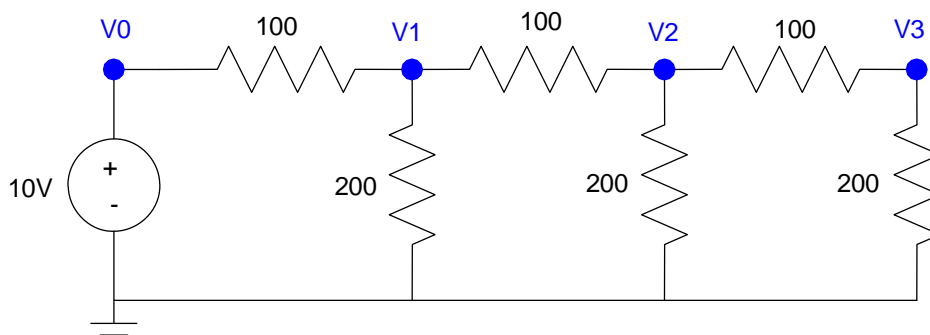
- 3a) Use voltage division to determine the voltages  $V_1$ ,  $V_2$ , and  $V_3$
- 3b) Determine the power dissipated in the 10 Ohm resistor (in Watts)



- 4a) Use current division to determine the current  $I_1$ ,  $I_2$ , and  $I_3$
- 4b) Determine the power dissipated in the 10 Ohm resistor (in Watts)



- 5) Write the voltage node equations for the following circuit. Solve for  $V_1$ .. $V_3$  using Matlab (or similar program)
- 6) Check your answers in PartSim (or similar program)



- 7) Write the voltage node equations for the following circuit. Solve for  $V_1$  ..  $V_3$  using Matlab (or similar program)
- 8) Check your answers in PartSim (or similar program)

