ECE 111 - Homework #8

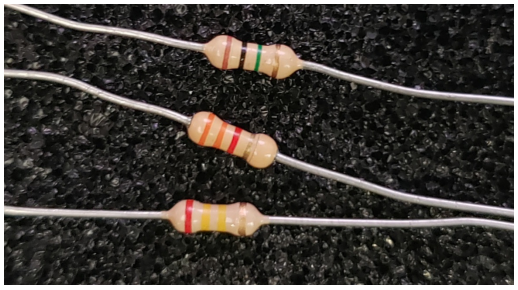
EE 206 Circuits I - Due Monday, March 11th

V = IR, P = VI

1) A resistor has the following volts / amps / resistance / power. Determine the missing parameters:

Volts	Amps	Ohms	Watts
32V	2.4A		
32V		8	
	3.0A		120W
32V			96W

Resistor Color Codes

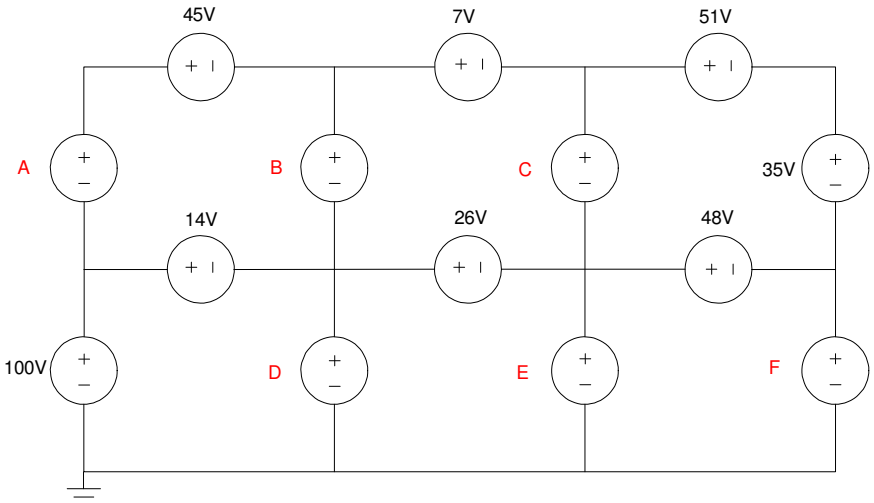


2) Determine the value of the following resistors

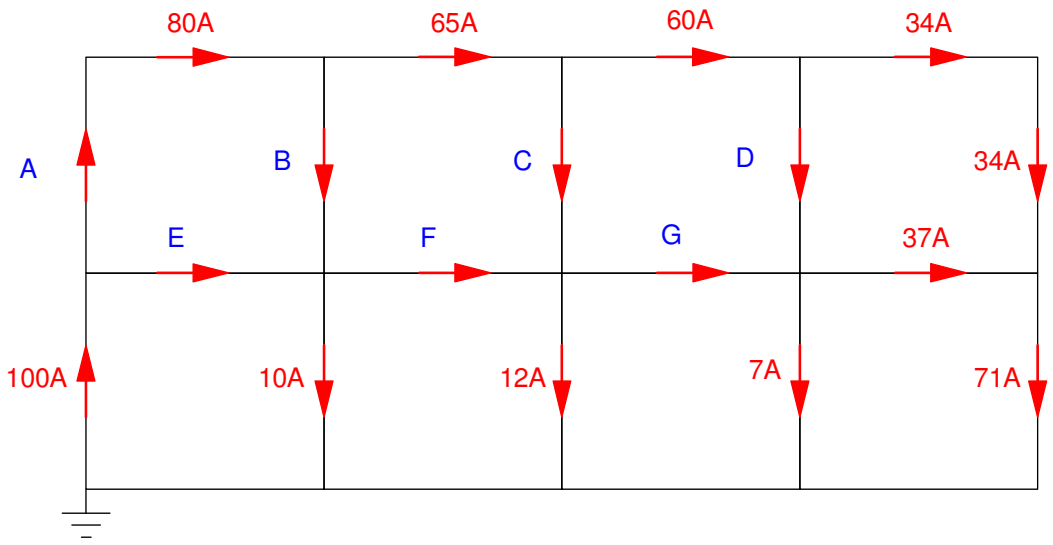
- a) Brown - Black - Green
- b) Orange - Orange - Red
- c) Red - Yellow - Yellow

Kirchoff's Laws:

3) Use conservation of voltage to determine the unknown voltages



4) Use conservation of current to determine the unknown currents

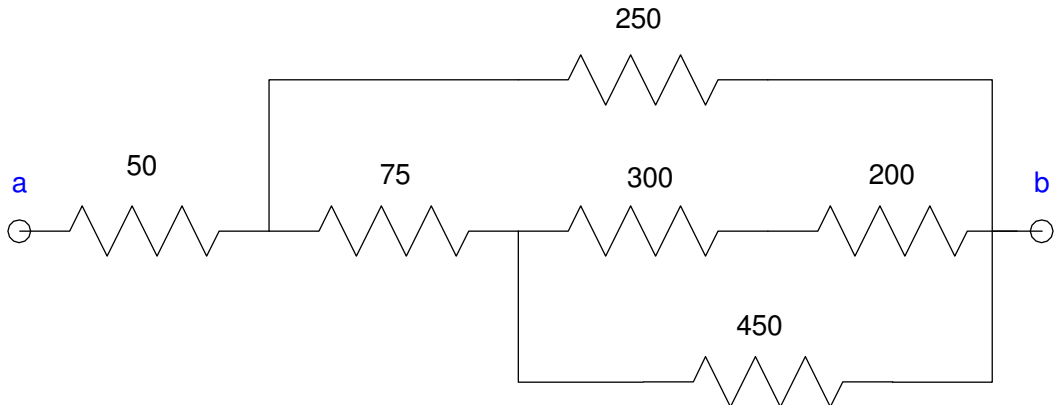


Resistors in Series and Parallel

5) Find the total resistance Rab by hand

6) Find the total resistance Rab using CircuitLab

- Apply a 10V source to a and b.
- Determine the current draw from the 10V source
- Calculate the net resistance from V = IR

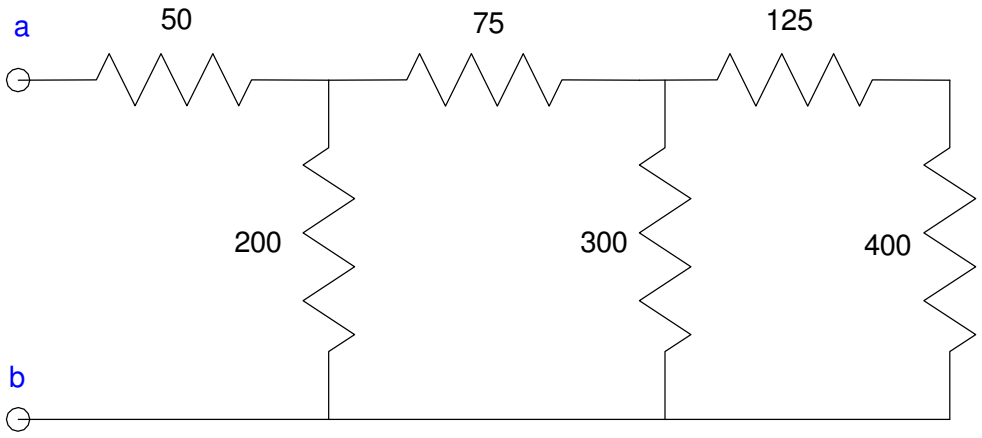


Problem #4 & 5

7) Find the total resistance Rab by hand

8) Find the total resistance, Rab, using CircuitLab

- Apply a 10V source to a and b.
- Determine the current draw from the 10V source
- Calculate the net resistance from V = IR

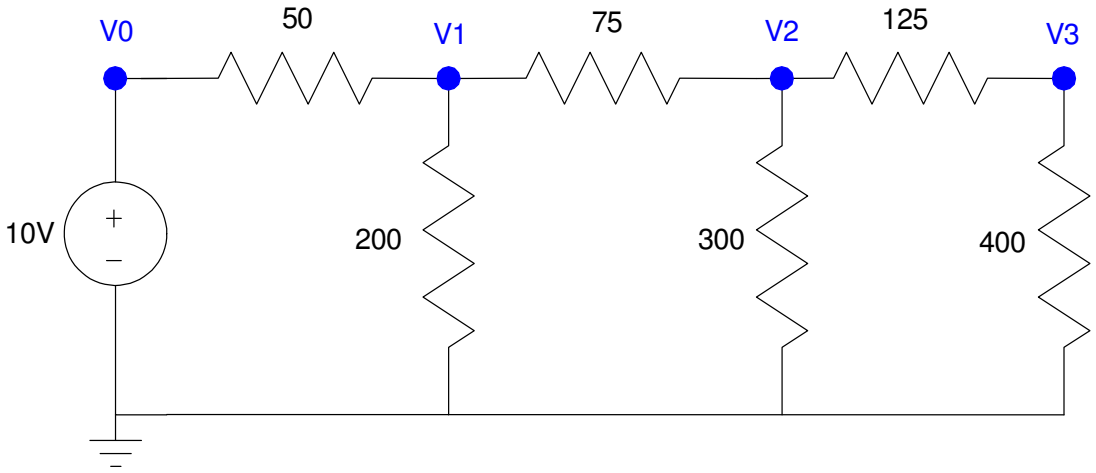


Problem 7 & 8

Voltage Division

9) Use voltage division to find V1, V2, and V3.

10) Use CircuitLab to find V1, V2, V3.



Problem 9 & 10