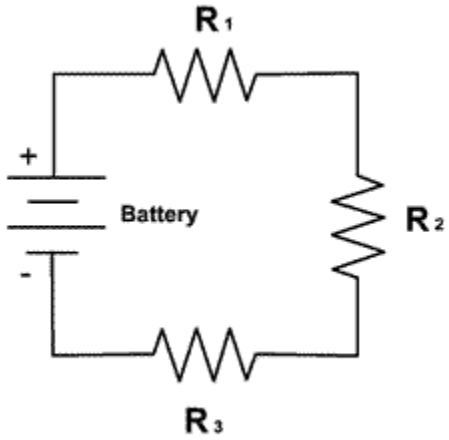
Name: _____ Date: _____ Course: _____ Professor: _____

E4b Prelab: Simple D.C. Circuits

Read Lab instructions and Watch Videos Before Answering Questions

1. Vashti has arranged three resistors and a battery into a circuit as shown below. The battery has a voltage of V = 52 V and the resistors have resistances of $R_1 = 72\ \Omega$, $R_2 = 117\ \Omega$, and $R_3 = 938\ \Omega$.

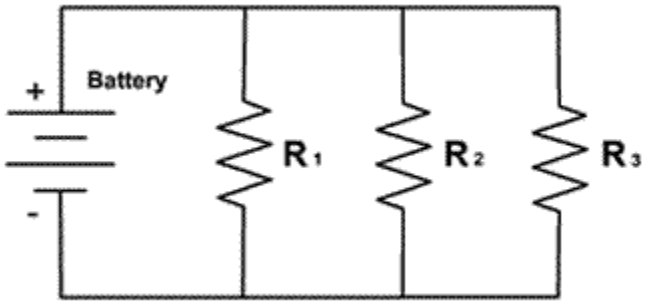


a) Calculate the equivalent resistant of the series circuit.

Hint: Read section 20.6 from your textbook for series wiring (Physics, Cutnell and Johnson).

b) Using Ohms Law, calculate the total current I_t that Vashti measures.

2. Vashti rearranges the resistors as shown below ($R_1 = 72\ \Omega$, $R_2 = 117\ \Omega$, and $R_3 = 938\ \Omega$). He keep the same voltage for the Battery (V = 52 V).



a) Calculate the equivalent resistant of the parallel circuit.

Hint: Read section 20.7 from your textbook for series wiring (Physics, Cutnell and Johnson).

b) Using Ohms Law, calculate the total current I_t that they measure.