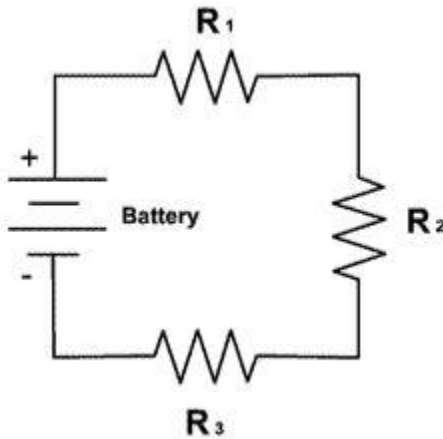Name: _____ Date: _____ Course: _____ Professor: _____

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 = 61 V and the resistors have resistances of $_1$ = 63 Ω, $_2$ = 127 Ω, and $_3$ = 867 Ω .
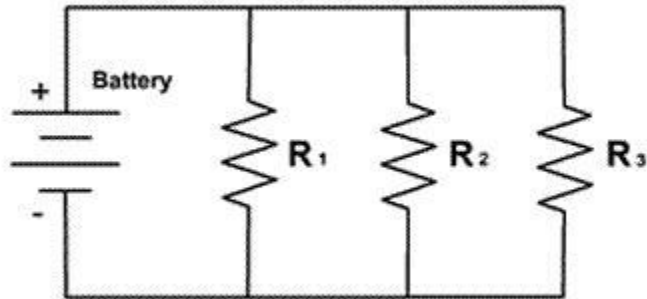

a) Calculate the equivalent resistant of the series circuit.

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

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

2. Vashti rearranges the resistors as shown below (R_1 = 63 Ω, R_2 = 127 Ω, and R_3 = 867 Ω). He keep the same voltage for the Battery (V = 61 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   that they measure.