Name: _____

Class Period: _____

Honors Physics: Circuits
Electrical Current Homework

Conceptual Questions:

1. A light bulb uses a small piece of metal called tungsten as the filament. This small piece of metal heats up so much that it glows when a current is run through it. What happens to the circuit when this piece of tungsten burns out?

2. Consider the analogy that can be made between a basic circuit and blood circulation in the body. What role would the heart, blood, blood vessels, and organs play when compared to a circuit?

3. Why might it be important to know how much current is flowing through a circuit? If you aren't sure, spend some time looking online at 'what happens when too much current flows through a circuit.'

Mathematical Questions

4. How many individual charges (protons/electrons) flow through a circuit with a 0.950 A current in one minute?

5. In a circuit, 8.95×10^{19} electrons flow through a circuit with a current of 0.650 A. How much time does this take?