Name_____ **Physics**

Parallel Circuits HW #2 Problem

A Parallel circuit contains a battery, (3) lamps in parallel with each other and a switch that controls the entire circuit.

- Lamp 1 Resistance = 6Ω
- Current through Lamp 2 = 0.5A
- Voltage drop across Lamp 3 = 12V
- Lamp 3 Resistance = 12 Ω

A) Draw the circuit and label all parts of the circuit

B) What is the voltage drop (potential difference) across Lamp 2?

C) Determine the resistance of Lamp 2.

D) Determine the amount of current moving through Lamp 1.

E) Determine the current moving through Lamp 3.

F) Determine the total effective resistance of the circuit.

G) How much total current is flowing when the switch is closed?

H) If Lamp 1 burns out, will the other two lamps work?
   a. Will it affect their brightness?