

Current:

$$Q = Ne$$
$$I = \frac{Q}{t}$$

Voltage:

$$V = \frac{E_e}{Q}$$

Ohm's Law

$$V = IR$$

Work and Power

$$P = VI$$
$$P = I^2 R$$
$$P = V^2 / R$$

1. If the current in the circuit is 1A, how many charges pass through a light bulb in
 - a) 1s
 - b) 1 min
 - c) 1 hour
2. How many electrons pass through the circuit question 1, over a period of 1 minute?
3. If the circuit in 2) gives of 200J of energy, what's the voltage on the light?
4. What's the resistance of the light bulb in 3)?
5. How much power is draw by the circuit in 3)?
6. If a 120V light bulb has a resistance of 100Ω , how much power is being drawn?
7. If 100W light bulb draws 2A, find
 - a) The resistance of the bulb
 - b) The voltage on the circuit.
 - c) The amount of energy liberated in 1 minute