

Electric Current

Name: _____ Form: _____

Electricity is the movement of tiny parts of the atom called electrons. Because they move from one part of a circuit to another (a little like water flowing in a river) scientists talk about electric current. Electric current is measured in amperes (or amps, for short). Essentially, “current” is a measure of how many electrons are flowing per second.

Eg. a 100 W Television has about 0.4 amps running through it. An 800 W microwave oven has about 3.3 amps running through it.

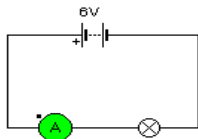
To measure the current we use an ammeter:



Part 1. Series Connections

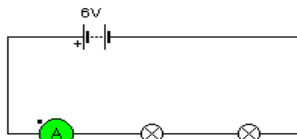
Measure the current flowing in the following circuits.

(A)



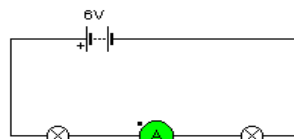
Current = _____

(B)



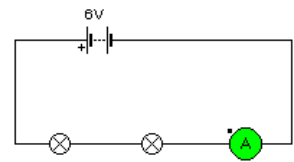
Current = _____

(C)



Current = _____

(D)



Current = _____

1. What do you notice about the current flowing in circuit “A” compared with the other circuits?

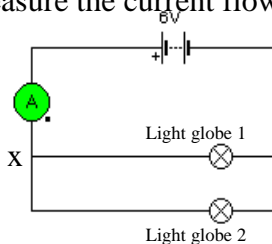
2. What do you notice about the current flowing in Circuits B, C and D?

3. What can be said about the amount of electric current flowing out of the battery compared to the amount of current flowing back into the battery?

Part 2. Parallel Connections

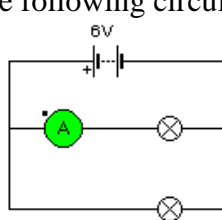
Measure the current flowing in the following circuits.

(E)



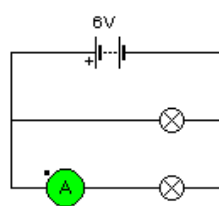
Current = _____

(F)



Current = _____

(G)



Current = _____

4. What do you notice about the current flowing in Circuits E, F, and G? (There should be a clear mathematical relationship)

5. In Circuit E, the current flows out of the battery and flows through the ammeter. What happens at point x?
