**Electric current (I)**

What is electric current?



**How is current measured?**

* Measured in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



* 1 ampere (Amp, A) = 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ per \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



* + (I = Q/t) I =



* + Q = t =



* Measured using an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



* Ammeters must be connected in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, so that the ammeter is in the path of the current and the current goes through the ammeter.



* The current we measure is often much smaller than 1A, so we often use milliamps (\_\_\_\_\_\_\_). 1mA = 0.001A OR \_\_\_\_\_\_\_\_\_\_\_\_mA = 1A



Example #1:

If 120C goes past a point in 1 minute, what is the current?



Example #2:

A current of 200mA is flowing for 30 seconds. How much charge goes past a point in that time?



**Current in a series circuit**

Current is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at all points in a series circuit



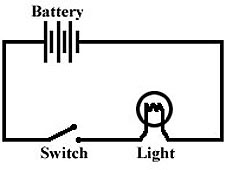
**Current in a parallel circuit**



Current \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when there is a branch point in a circuit.



**Current practice problems**

1. What is the current if it takes 48 seconds for 24 coulombs of charge to flow through a lamp?
2. How long would it take for 100C of current to pass through a small bulb if the current was 50mA?
3. If the current measured at point A in the circuit below was 120mA, what would the current be if measured at point B? Explain your answer.



1. How much charge would pass through a kettle if the current was 1.5A and the kettle was running for 5 minutes?
2. Find the missing current for each of the circuits shown.

