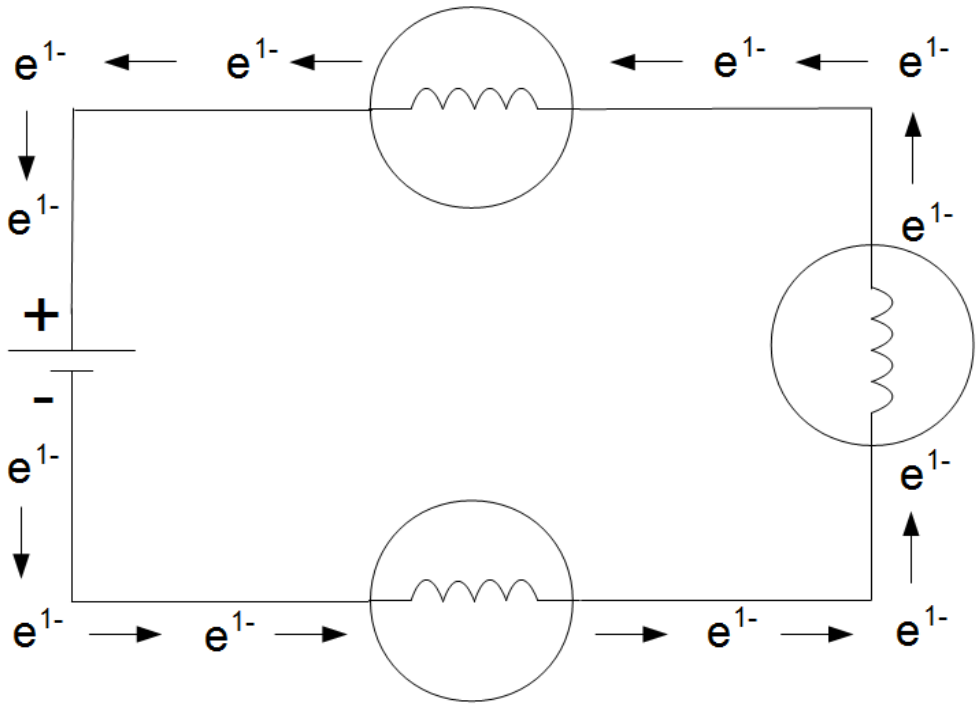
Series and Parallel Circuits

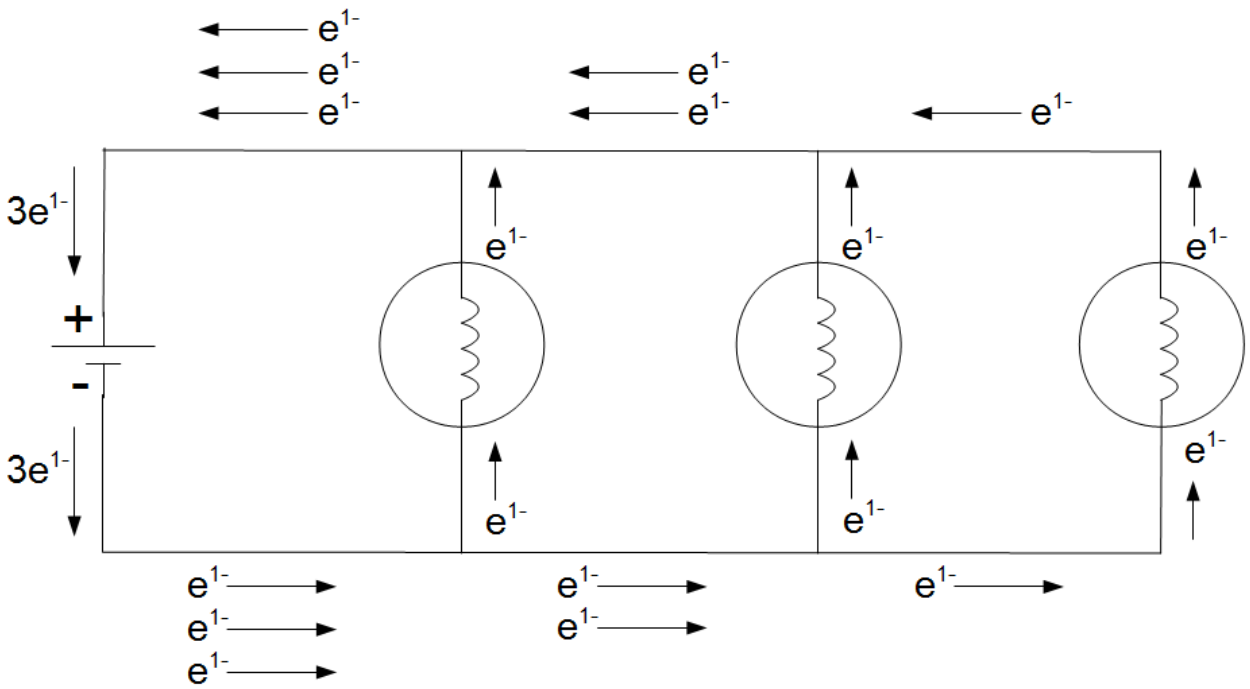
Series:



In a series circuit all loads (i.e. light bulbs, resistors, etc.) are connected one after another. The entire current of electrons must pass through each load one after another. Therefore the current at each load will be the same and equal to the current leaving the power supply. The voltage of the electrons will be distributed between the different loads, such

that all of the voltage will be consumed before the electrons return to the power supply. The voltage drop at each load will add to the total voltage from the power supply.

Parallel:



In a parallel circuit there are two or more branches. This give the current of electrons more than one possible path by which to return to the power supply. This means that the current

in the different parallel paths will add to give the total current at the power supply. The voltage of the electrons will be entirely consumed in each parallel branch. Therefore the voltage drop in each parallel branch must be equal to the voltage at the power supply.