Circuits

Series Circuit

- Current passing through each point is the same.
- The total resistance is the sum of the individual resistors in the circuit.
- Current and Voltage are related by Ohm's Law
- The voltage drop across each device is related to its individual resistance, and when added together equal the total voltage for the circuit.

Parallel Circuit

- The voltage across each device is the same.
- The current divides between each parallel branch. Total current equals the sum of the individual currents.
- As the number of branches increases, total resistance decreases.
- $1/R_{tot} = 1/R_1 + 1/R_2 + 1/R_3 \ldots.$