

SERIES - PARALLEL CIRCUIT COMPARISON

■ In a series circuit:

- The total resistance always increases as more elements are added to the circuit. As a result, the total amount of current flowing always decreases.**
- To maintain the same current as more elements are added, greater and greater voltage will be needed from the power source.**
- If the wire size is sufficient (or can be ignored) for a single element in the circuit, then wire size will generally be sufficient if more elements are added.**

■ In a parallel circuit:

- The total resistance always decreases as more branches are added to the circuit. As a result, the total amount of current flowing always increases.**
- To maintain the same current through each branch, as more branches are added, the power source and wire must be capable of supplying all of the additional current.**
- As more branches are added, the resistance of the wiring becomes increasingly important and cannot be ignored.**