

Series Circuits

Name: _____

| | Battery Voltage | Current | Voltage Drop | Calculated Resistance (V drop/Current) | Total Resistance (B V/Current) |
|--------------------------------|-----------------|---------|--------------|---|-----------------------------------|
| | V | A | V | Ω | Ω |
| Single Resistor Series Circuit | | | | | |

| | | | | | |
|-----------------------------|--|--|----|--|--|
| Two Resistor Series Circuit | | | #1 | | |
| | | | #2 | | |

| | | | | | |
|-------------------------------|--|--|----|--|--|
| Three Resistor Series Circuit | | | #1 | | |
| | | | #2 | | |
| | | | #3 | | |

Right click on the resistors to change the resistance to the values below. Total Resistance

| | | | | |
|---|--|--|----|--|
| Varied Resistors 10, 20, & 30 Ω | | | #1 | |
| | | | #2 | |
| | | | #3 | |

| | | | | |
|---------------|--|--|----|--|
| Short Circuit | | | #1 | |
| | | | #2 | |
| | | | #3 | |

What is the relationship between the battery voltage and the voltage drops?

How do the currents compare in a series circuit?

- A) What happens to the current as more resistors are added to the circuit?
- B) How does the current compare throughout the circuit?

What is the relationship to the total resistance and the individual resistors?