

Name:

## Ohms Law Worksheet

**Purpose:** To investigate Ohm's Law using  $100\Omega$  resistors and a 9V power source by connecting the resistors in series and in parallel.

**Procedure:**

1) Connect the first  $100\Omega$  resistor to the 9V battery.

- What is the voltage across the resistor?
- Calculate the current through the resistor.

Connect the second  $100\Omega$  resistor to the first *in series*.

- What is the new effective resistance?
- What is the voltage across each resistor?
- Calculate the current through each resistor.

Repeat for 3 resistors in series.

2) Connect the first  $100\Omega$  resistor to the 9V battery. Connect the second  $100\Omega$  resistor to the first *in parallel*.

- What is the new effective resistance of the 2 resistors?
- What is the voltage across each resistor?
- Calculate the current through each resistor.

Repeat for 3 resistors in parallel.