Name: _____ **Date:** _____

In a Row Math Worksheet

1. Draw a circuit diagram for a circuit that has one battery and two light bulbs connected in series.

2. For the above circuit, one bulb has a resistance of 2 Ω and a second bulb has a resistance of 3 Ω. The total resistance for two bulbs in series is equal to the sum of their resistances.

   Use this equation to find the total resistance of the circuit: $R_{total} = R_1 + R_2$

3. For a circuit that has one battery and two light bulbs connected in series, one bulb has a resistance of 1 Ω, and the total resistance of the circuit is 6 Ω. What is the resistance of the second light bulb?

4. If a circuit has two 1.5 V batteries in series, what is the voltage across the two batteries?

5. If a circuit has two 1.5 V batteries in series and one 3 Ω light bulb, what is the current in the circuit?

   Use the Ohm's law equation: $I = \frac{V}{R}$