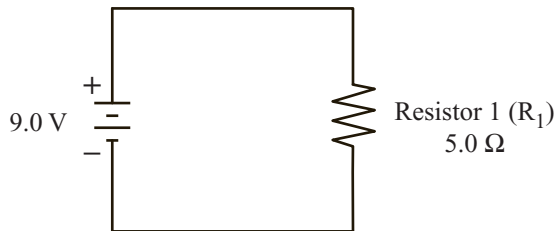


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A diagram for a simple circuit is shown below.



Ohm's law

$$I = \frac{V}{R}$$

Suppose a second resistor (R_2), with a resistance of 7.0Ω , is added to the circuit in series.

- Draw the diagram for the series circuit with the two resistors. Label the components of the new circuit.
- Calculate the total amount of current in the new circuit. Show your calculations and include units in your answer.
- Calculate the potential difference (voltage) across each resistor, R_1 and R_2 , in the new circuit. Show your calculations and include units in your answer.