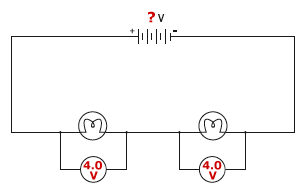
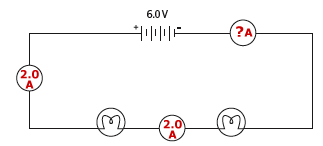
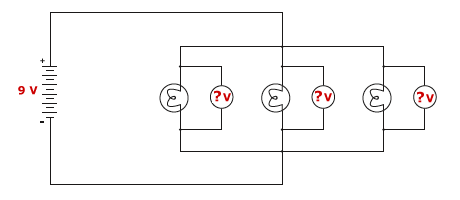
**Warm-up:** Review parallel vs series circuits

A circuit contains two lamps, each with a measured potential difference of 4.0 V.  
  
  
  
What is the voltage of the battery in the circuit?

* 1. 16.0 V
  2. 8.0 V
  3. 1.0 V
  4. 4.0 V

A circuit contains two lamps, a battery, and three ammeters.  
  
  
  
Based on the readings on two of the ammeters, what is the reading on the third ammeter?

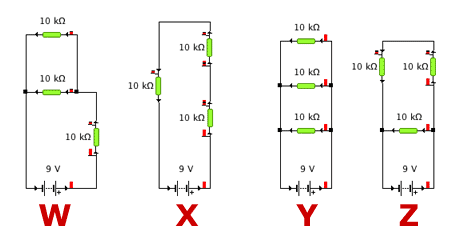
* 1. 2.0 A
  2. 4.0 A
  3. 1.0 A
  4. 3.0 A

Three lamps are connected in a circuit in parallel with a 9.0 V battery.  
  
  
  
What will be the measured potential difference across each of the three bulbs?

* 1. 9.0 V
  2. 3.0 V
  3. 1.0 V
  4. 4.5 V

Which of the following statements regarding current in circuits is true?

* 1. The total current in a parallel circuit must always equal the voltage in the circuit
  2. The current in a series circuit varies from component to component
  3. The current at all points in a series circuit is the same
  4. The current at all points in a parallel circuit is the same

Which of the following circuits containing three equal value resistors would result in the greatest total circuit resistance?  
  


* 1. Circuit W
  2. Circuit X
  3. Circuit Z
  4. Circuit Y