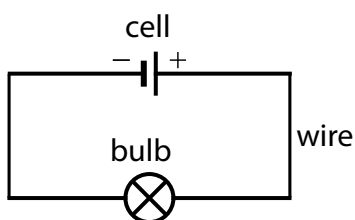


Potential and Circuits

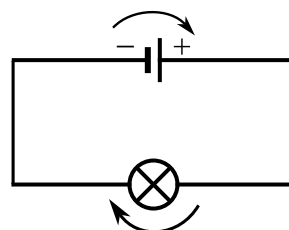
Electric charges move around a circuit to make a _____. The charges can be _____ or _____. Electric charges are the _____ "material" in a circuit.

The amount of **work done** on _____ is called the **potential**. It is measured in _____ (V).

The potential will _____ around a circuit.



work done on charges,
adds potential

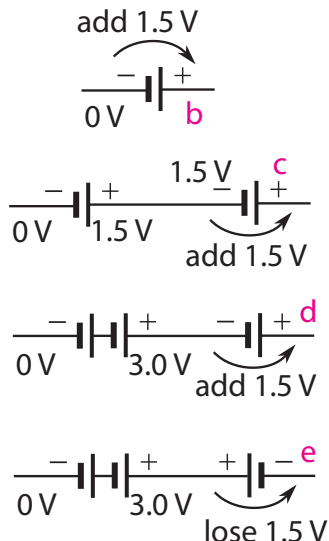


no work done,
same potential

work done by charges
to light the bulb,
lowers potential

1 Complete the sentences below with the words **potential**, **positive**, **negative**.

(a) The potential at the _____ terminal of a cell, the short side, is 0 V. The _____ at the _____ terminal, the long side, is 1.5 V.



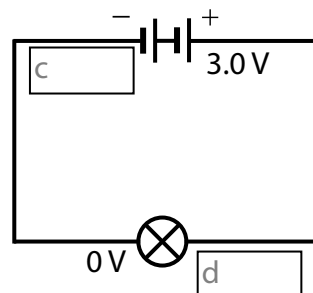
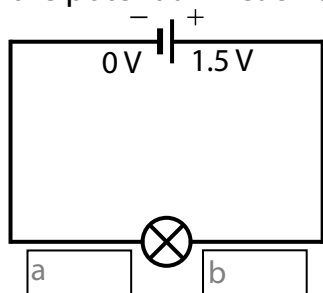
(b) What is the potential at (b)?

(c) Two cells are connected together. What is the potential at (c)?

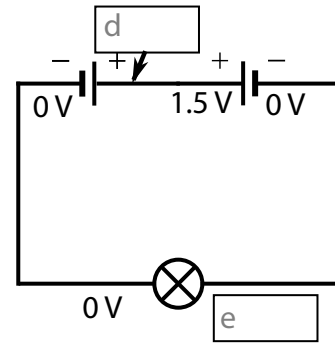
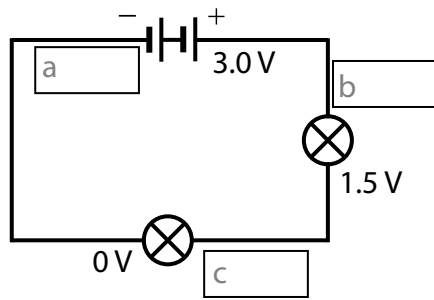
(d) Three cells are now connected together. What is the potential at (d)?

(e) The third cell is now connected in reverse. What is the potential at (e)?

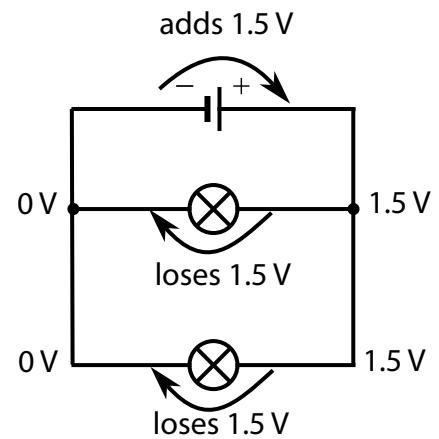
2 Write down the potential in each of the boxes.



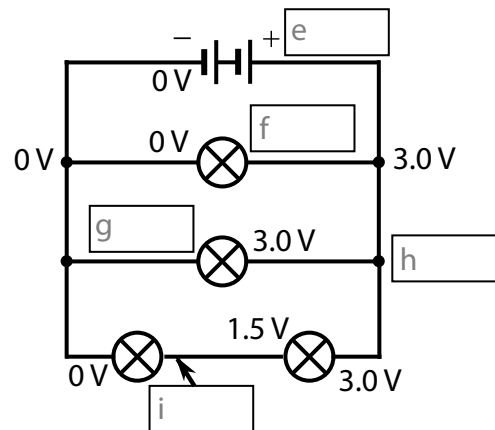
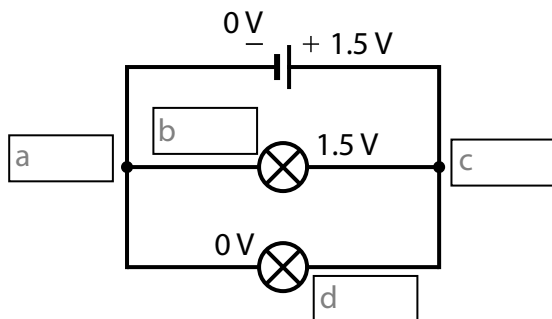
3 Write down the potential in each of the boxes.



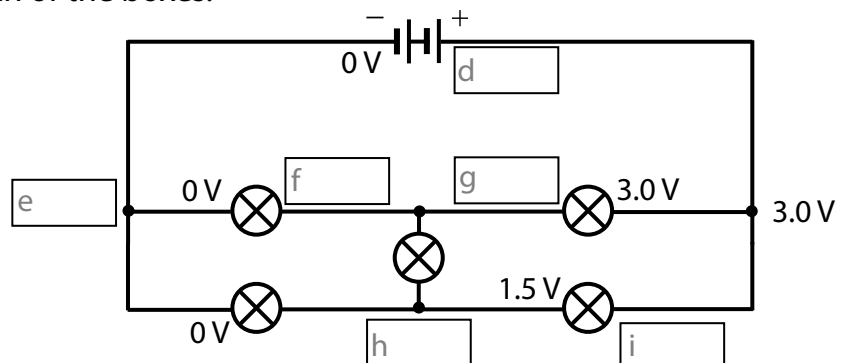
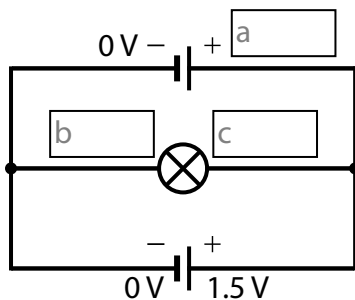
_____ circuits have _____. _____ is done by a _____ when passing through a junction. The _____ stays the _____.



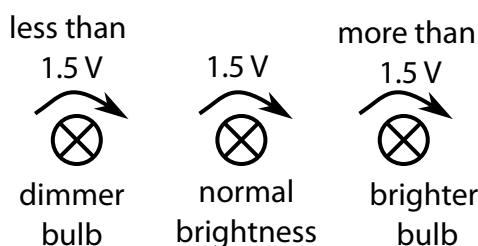
4 Write down the potential in each of the boxes.



5 Write down the potential in each of the boxes.

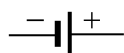


The **difference** in **potential** across a battery or a bulb is called the ____ or _____. When there is a _____ across a _____, charges _____ through it, lighting it up.



6 What is the potential difference for each combination of cells or **batteries**? Each cell has a potential difference of 1.5 V.

(a) 1-cell battery



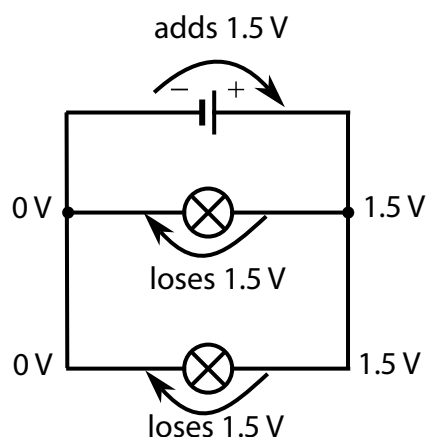
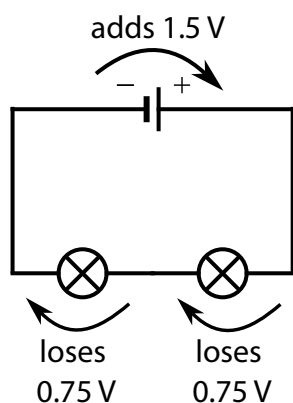
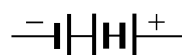
(c) 3-cell battery



(b) 2-cell battery



(d) odd 3-cell battery



If ____ bulbs are ____ to each other on the same _____ of the circuit, we say they are in _____. The _____ is _____ across the two. If the bulbs are _____, it is shared _____.

If ____ bulbs are on _____ of the circuit, we say the _____ are in _____. The _____ is the _____ across the two _____ of the circuit.

7 In the circuits in question 4, which bulbs are in series and which bulbs are in parallel?

8 Go back to the circuits in questions 2, 3, 4, and 5. What is the brightness of each bulb? Are they **normal brightness**, **dimmer** or **brighter**? A bulb with normal brightness means the potential difference across it is 1.5 V.