



Electrical circuits

1. Put the items from the box into their correct category: conductor or insulator.

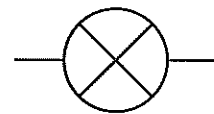
Copper	Rubber	Plastic	Aluminium strip
Steel	Paper	Salt water	

Conductor	Insulator

2. For each of the following items, write the name or draw the symbol for the circuit component.

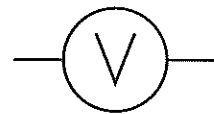
(a) Connecting wire

(d)



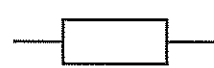
(b) Open switch

(e)

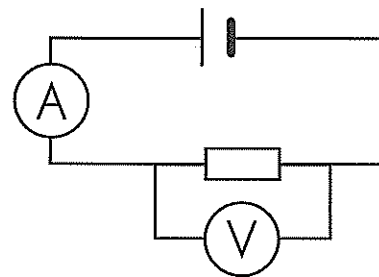


(c) Ammeter

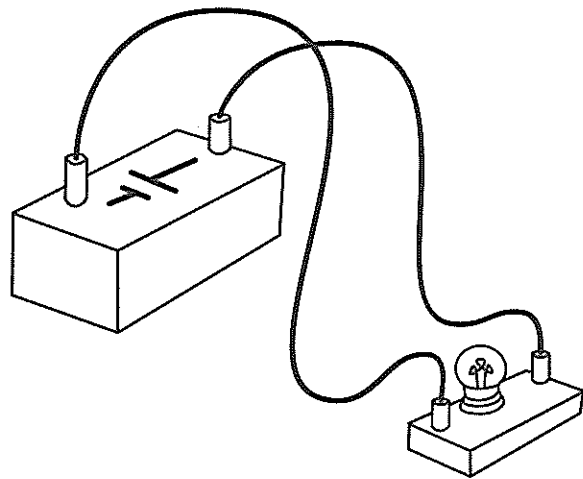
(f)



3. Is this diagram circuit series or parallel? Give a reason for your answer.



4. Create a circuit diagram of this circuit.



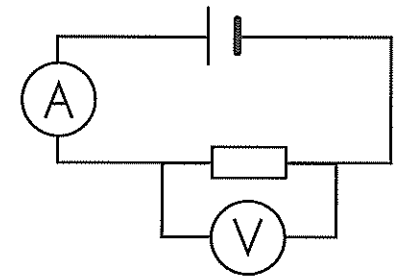
Electrical circuits

1. Fill the gaps in the following passage.

The current in a series circuit is the (a) everywhere. In a parallel circuit the current in the branches (b) to the total current in the circuit. Voltage in a series circuit (c) to the total voltage in the circuit. Voltage in a parallel circuit is the (d) everywhere.

An ammeter is connected in (e) in a circuit so that it can count the electrons. On the other hand, a voltmeter is connected in (f) so it can measure the potential difference across a component.

2. Is this diagram circuit series or parallel? Give a reason for your answer.

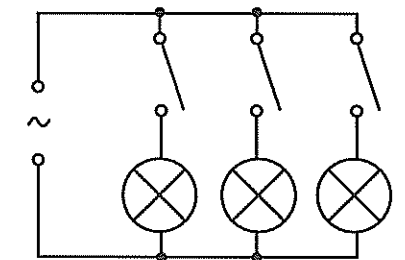


3. Answer these questions about the circuit on the right.

(a) How many paths can the electrical current follow?

(b) If the first switch is closed, what happens to the circuit?

(c) If all the switches are closed, what happens to the circuit?



4. In your book, draw a circuit diagram for each of the following.

(a) Two cells and two bulbs in series.

(b) Two cells and two bulbs in parallel.

(c) Two cells with two bulbs in series; an ammeter is measuring the current in this circuit.

(d) Two cells with two bulbs in series; a voltmeter is measuring the voltage of one bulb in this circuit.

(e) Two cells with three bulbs in parallel; two switches so that if one switch is on, two bulbs glow and if the other switch is on, one bulb glows.

5. In your book, predict what will happen in each of the following situations. Give reasons for each prediction.

(a) A third bulb is connected in series in a circuit with 12 V supplied to it.

(b) A third bulb is connected in parallel in a circuit with 12 V supplied to it.