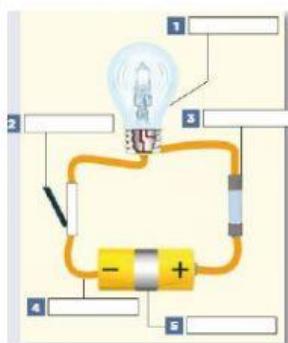


## Electricity 2 – Electric circuits

### 1) Drag the terms to the boxes:



1. fuse      2. load      3. power source  
4. switch      5. wire

### 2) Match the words with their definitions:

1. load	a <input type="checkbox"/> a device which interrupts the circuit
2. switch	b <input type="checkbox"/> a circuit in which wires are disconnected
3. source	c <input type="checkbox"/> a device which provides power
4. fuse	d <input type="checkbox"/> a complete circuit with no breaks at all
5. closed circuit	e <input type="checkbox"/> a device which consumes electric power
6. broken circuit	f <input type="checkbox"/> a protective device

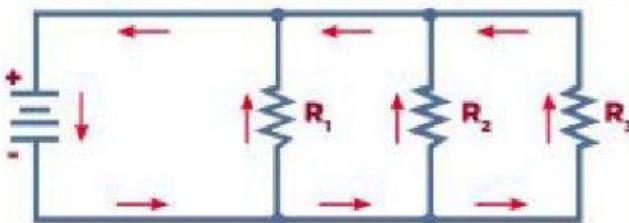
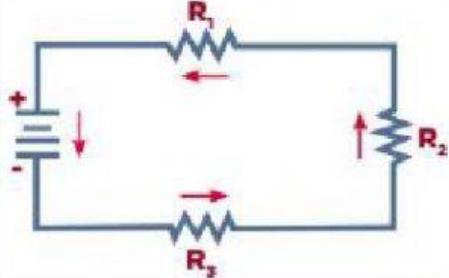
### 3) Complete the sentences with suitable words:

1. A simple circuit consists of a power source, two conducting wires and a load .
2. A lamp in a circuit lights up.
3. Light bulbs, electric motors and speakers are examples of lights.
4. A switch controls the current flow in an electrical device.
5. A short circuit occurs when there is a drop in the resistance or a broken circuit.
6. We can use fuses to prevent short circuits. They melt when too much current flows through them.

#### 4) Listen and complete the words into the text:

components current turn on branch amount  
positive appliances continue burns out path

The (1) components of a circuit can be wired in two different ways: series or parallel. If components are arranged one after another to form a single (2) between the terminals and the components, the circuit is known as a **series circuit**. In this type of circuit, the (3) flows from the negative terminal to the (4) terminal, passing through all the other components of the circuit. This means that the (5) of energy passing through all the components in the series is the same. The main disadvantage of a series circuit is that when a single component in the path (6) , the entire circuit stops operating (e.g. Christmas tree lights).

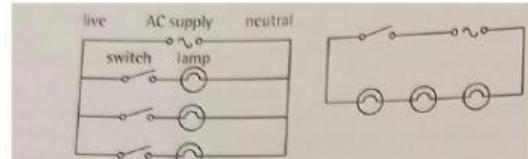


For example, you don't have to (10)

A **parallel circuit** consists of several paths connecting the different components. Each separate path is called a (7) of the circuit. Current from the source divides and flows through the different **branches**. Unlike series circuits, if one of the components in the parallel circuit **burns out**, the other paths (8) to operate. Parallel circuits are commonly used to connect (9) at home, so that each **socket** can function independently.

#### 5) Label these 4 circuits:

an integrated circuit (microchip)



lamps in parallel

lamps in series

a printed circuit board



**6) Complete the definitions with following terms:**

*components, conductor, independantly, integrated, neutral, plugs, parallel, power, printed, series, short, switches*

1. \_\_\_\_\_ circuits supply the sockets for the \_\_\_\_\_ on appliances.
2. A simple circuit where all the components are placed one after another along the same \_\_\_\_\_ is a \_\_\_\_\_ circuit.
3. A microchip is a very small, often complex \_\_\_\_\_ circuit.
4. When live and \_\_\_\_\_ conductors touch each other when the current is flowing, a \_\_\_\_\_ circuit occurs.
5. In a \_\_\_\_\_ circuit, different components are controlled \_\_\_\_\_, by separate \_\_\_\_\_.
6. \_\_\_\_\_ circuits can be populated with a large number of \_\_\_\_\_.

**7) Replace the words printed in italics with their synonyms. Choose from this list:**

*accommodated, adjusted, breakdowns, clients, excessive, loading up, melt, people, robbers, solidify*

A fuse can be added to an electric circuit to protect it from the effects of *undue* / \_\_\_\_\_ power. In case of overloading, the heat-sensitive alloy in the fuse will *liquefy* / \_\_\_\_\_ and open the circuit. A circuit breaker is fundamental to protect homes against *overloading* / \_\_\_\_\_ and short circuits. A circuit breaker can be *reset* / \_\_\_\_\_ after the overloading. An electrician should always provide his *customers* / \_\_\_\_\_ with a plan of the electric circuits in the house which will help in case of *faults* / \_\_\_\_\_.