

What do these terms mean?

Potential Difference

Resistance

Constant

Current

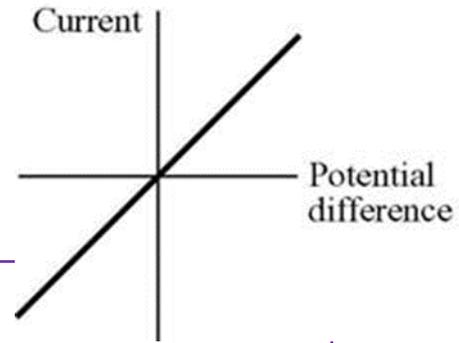
Gradient

Directly proportional

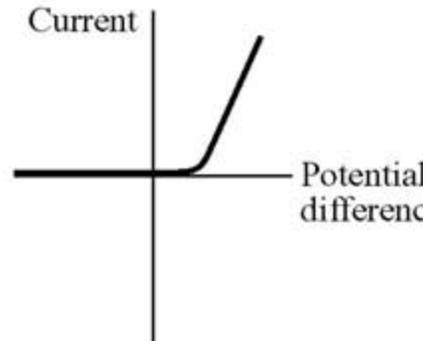


IV Characteristics

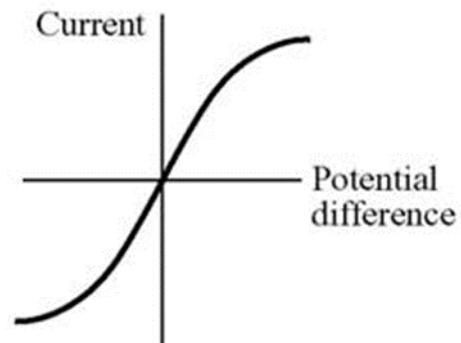
Wire/fixed resistor



Diode



Fillament bulb



Complete the sentence.

Choose answers from the box.

Each answer may be used once, more than once or not at all.

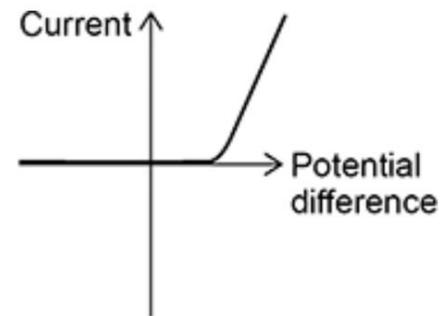
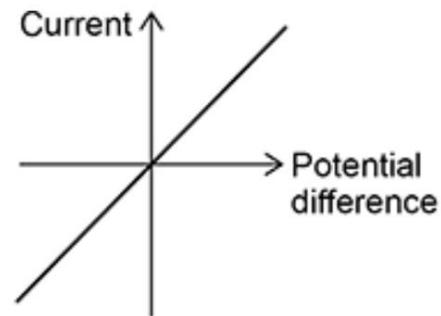
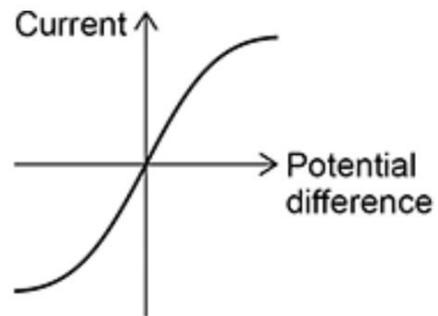
decrease	increase	stay the same
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Increasing the current in a filament lamp makes the temperature of the lamp _____ and the resistance of the lamp _____.

(2)

Which graph shows the relationship between potential difference and current for a filament lamp?

Tick (✓) **one** box.



Domestic Electricity



The amount of electrical energy transferred to an appliance depends on its power, and on the length of time it is switched on for. The kilowatt hour (kWh) is used as a unit of energy for calculating electricity bills.

$$\text{Energy transferred (kWh)} = \text{Power (kW)} \times \text{time (h)}$$



- (b) In the table below three electrical appliances are listed with their power ratings and the number of hours they are used each week.

ELECTRICAL APPLIANCE	POWER RATINGS (W)	TIME USED EACH WEEK (h)	k Wh USED EACH WEEK
TV	200	35	
Kettle	2000	2	
Toaster	1000	1	
Cooker	11 500	7	

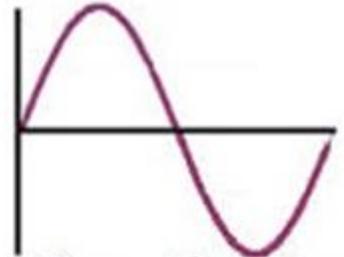
- (i) Complete the table by inserting the number of kWh used by each appliance each week.
- (ii) Which appliance would cost the least to run per week?
- _____
- (iii) The cost of running a toaster is 8p per week. How much does it cost to run the kettle each week?



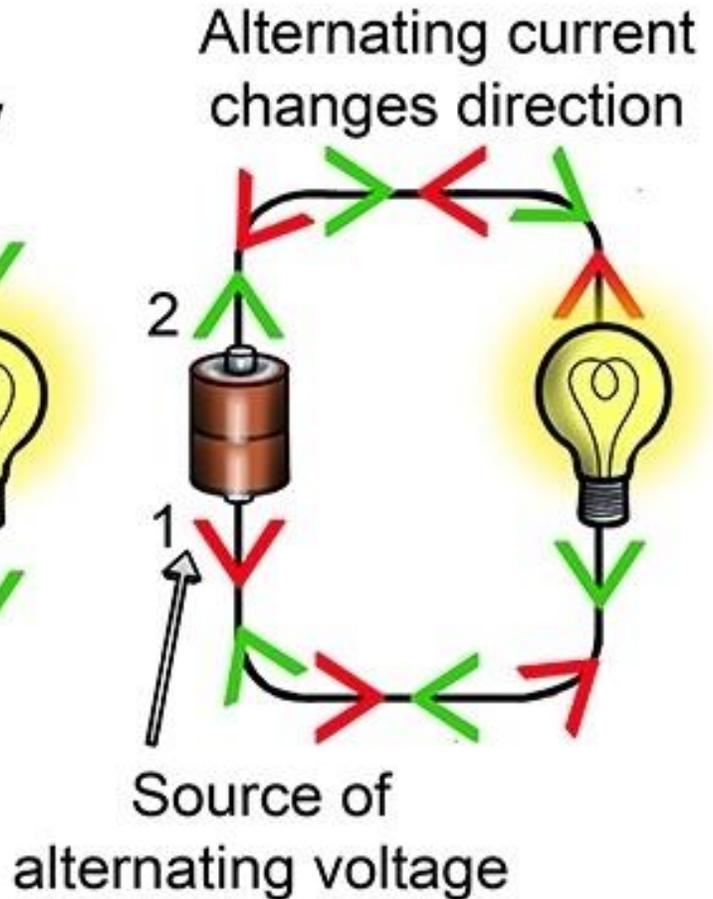
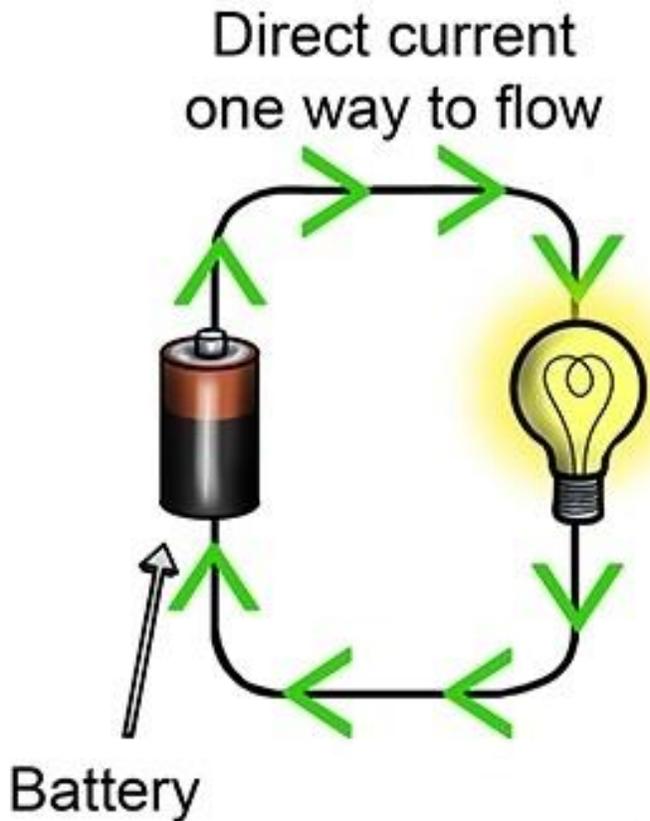
Alternating or Direct Current



Direct Current



Alternating Current



Alternating Current

If the current constantly changes direction it is called alternating current, or a.c. Mains electricity is an a.c. supply. The UK mains supply is about 230 V. It has a frequency of 50 Hz, which means that it changes direction and back again 50 times a second.



Direct Current

If the current flows in only one direction it is called direct current, or d.c. Batteries and solar cells supply d.c. electricity. A typical cell or battery may supply 1.5 V.



Transporting Electricity

