

Electrical Charge and Current

AQA GCSE Physics · Electricity

Current tells us how many charges are passing in one second.

Formula in words

Formula in algebra

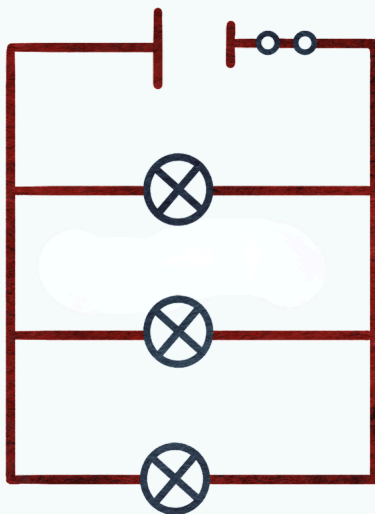
Example

Question

The current flowing through each bulb is 45 mA, and the 3-bulb torch is switched on for a minute. How much charge flows through the cell? Include the units.

[4 marks]

Diagram



Calculation

Current, Resistance and Potential Difference

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Current, resistance and potential difference (voltage)

Voltage tells us how much energy is transferred from or to a charge.

REMEMBER

Resistors in **series** add up. Resistors in **parallel** make the total resistance **less** than the smallest resistor.

Formula in words

Formula in algebra

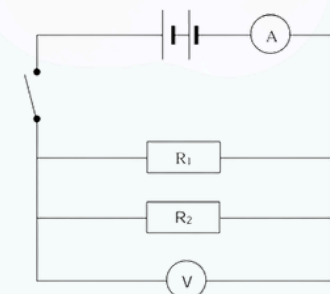
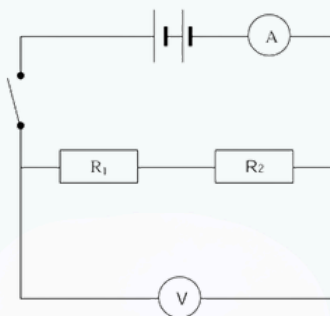
Example

Question

What is the total resistance when the two $250\ \Omega$ resistors are in **series**, and what is the total resistance of the circuit when they are in **parallel**? Use the values on the voltmeter and ammeter to either calculate or check your answer.

[4 marks]

Diagram



Calculation