

- 2 A student investigates how the current in a filament lamp changes when the voltage across the lamp is varied.

(a) Draw a circuit diagram the student could use in their investigation.

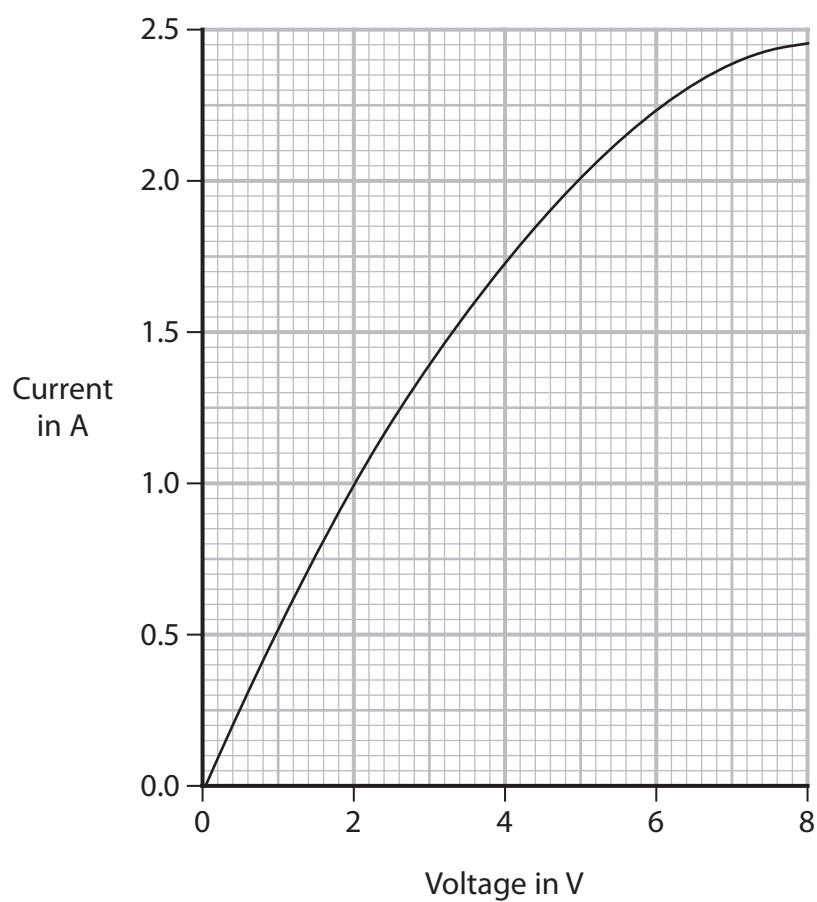
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- (b) The graph shows the student's results.



(i) Describe the relationship between current and voltage shown on the graph.

(2)

(ii) State the formula linking resistance, voltage and current.

(1)

(iii) Use the graph to determine the resistance of the filament lamp when the voltage across the lamp is 7.2V.

(3)

resistance = .....  $\Omega$

**(Total for Question 2 = 10 marks)**



P 7 1 9 5 5 A 0 7 3 2