

- 5 A student does an investigation to determine the current-voltage graph for an unknown component, X.

The student uses this equipment

- component X
- cell
- variable resistor
- ammeter
- voltmeter
- connecting wires

- (a) Complete the circuit diagram to show how the student should set up this equipment for her investigation.

(4)

component X



(b) The student completes her investigation.

The table shows her results.

Voltage in V	Current in mA
0.00	0
0.10	0
0.20	0
0.30	0
0.40	0
0.50	2
0.60	8
0.70	33
0.80	140

(i) Plot a graph of the student's results on the grid.

Plot current on the y-axis and voltage on the x-axis.

(3)

(ii) Draw a curve of best fit.

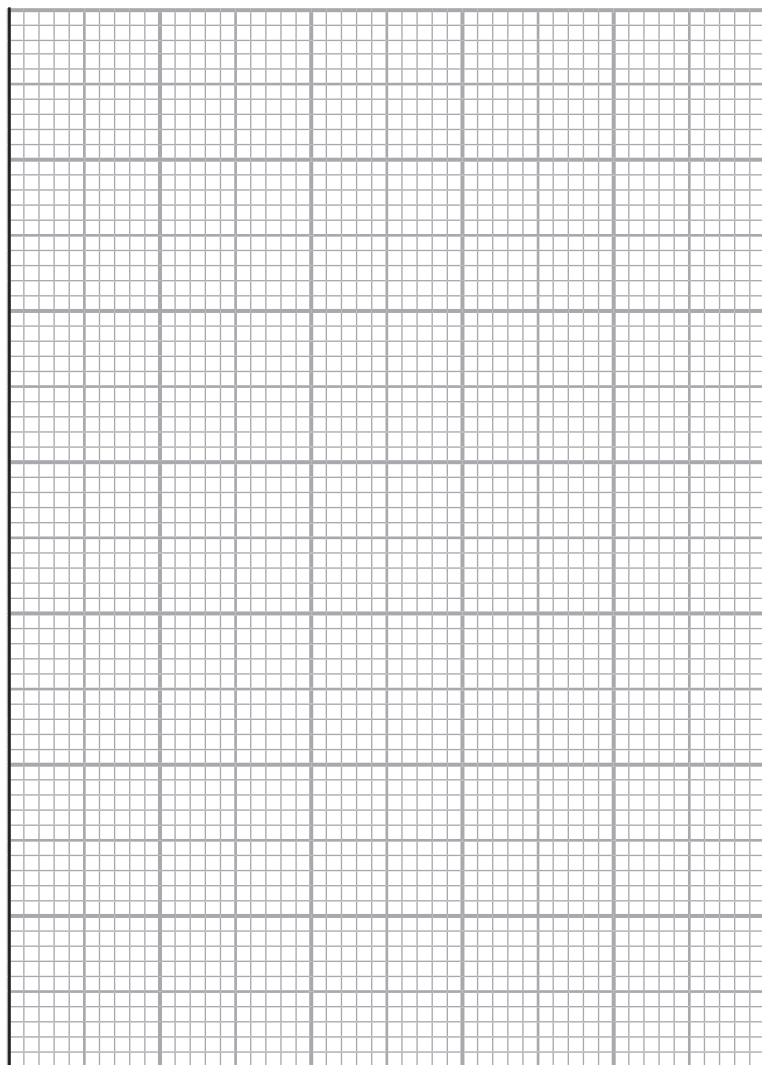
(1)



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(iii) State the name of component X.

(1)

(Total for Question 5 = 9 marks)

