(c) The student adds weights to balance the rod for different currents.

The table shows her results.

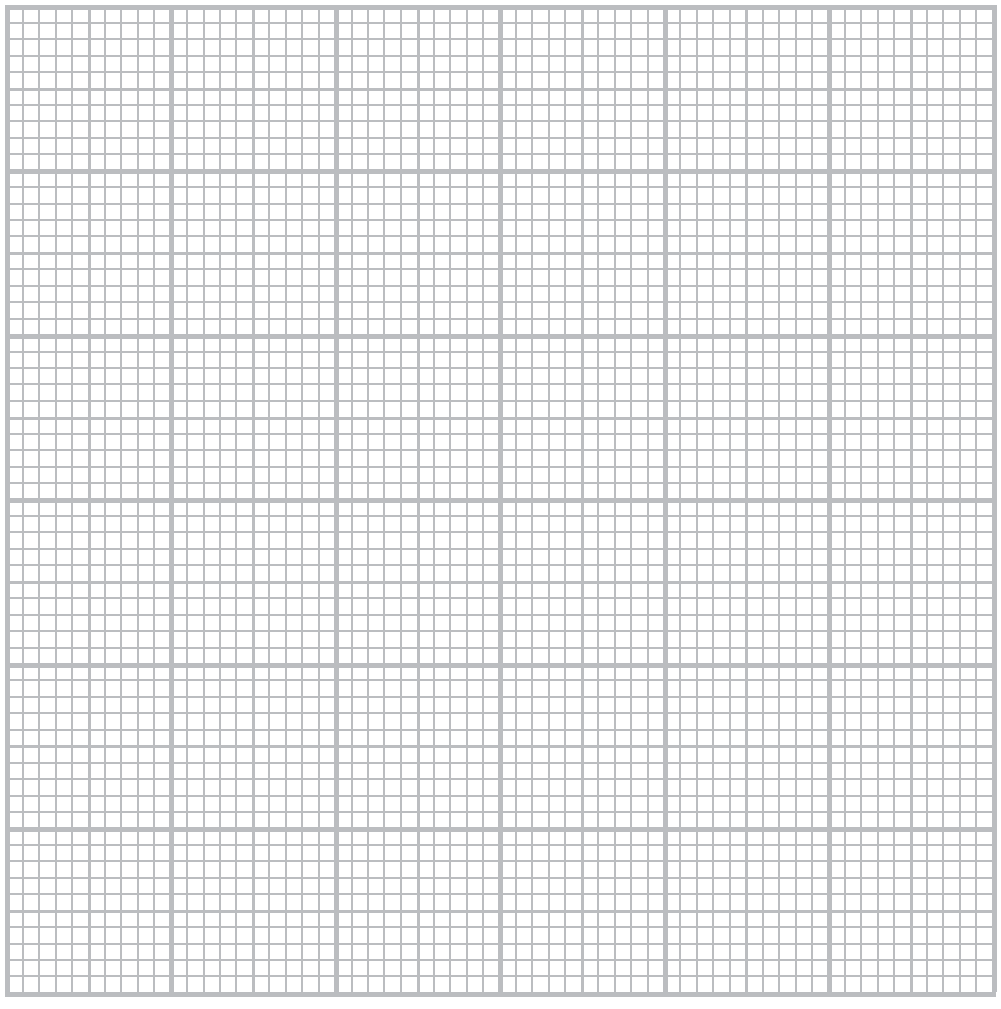
Current in A	Total weight added in N
0.0	0.1
0.1	0.5
0.5	2.1
0.7	2.5
0.9	3.7
1.1	4.5

(i) Plot a graph of the student's results, with the independent variable on the *x*-axis.

(4)

(ii) Draw a straight line of best fit.

(1)



(iii) Suggest why the student should repeat the reading for a current of 0.7 A.

(2)

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(iv) Describe the relationship between the current and the force produced by the magnetic field.

(2)

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(v) Estimate the weight needed to balance the rod when the current is 2 A.

(2)

weight needed = ... N

(Total for Question 6 = 17 marks)