

7 (a) Complete the table of values for

$$y = 0.5^{\left(\frac{x}{3} + 1\right)} + 2$$

giving each value to 2 decimal places where appropriate.

x	-6	-5	-4	-3	-2	-1	0
y	4	3.59	3.26				2.5

(2)

(b) On the grid opposite, draw the graph of $y = 0.5^{\left(\frac{x}{3} + 1\right)} + 2$ for $-6 \leq x \leq 0$

(2)

(c) By drawing a suitable straight line on the grid, obtain an estimate, to one decimal place, of the root of the equation

$$\log_2(2x + 2)^3 + x + 3 = 0 \text{ in the interval } -6 \leq x \leq 0$$

(6)

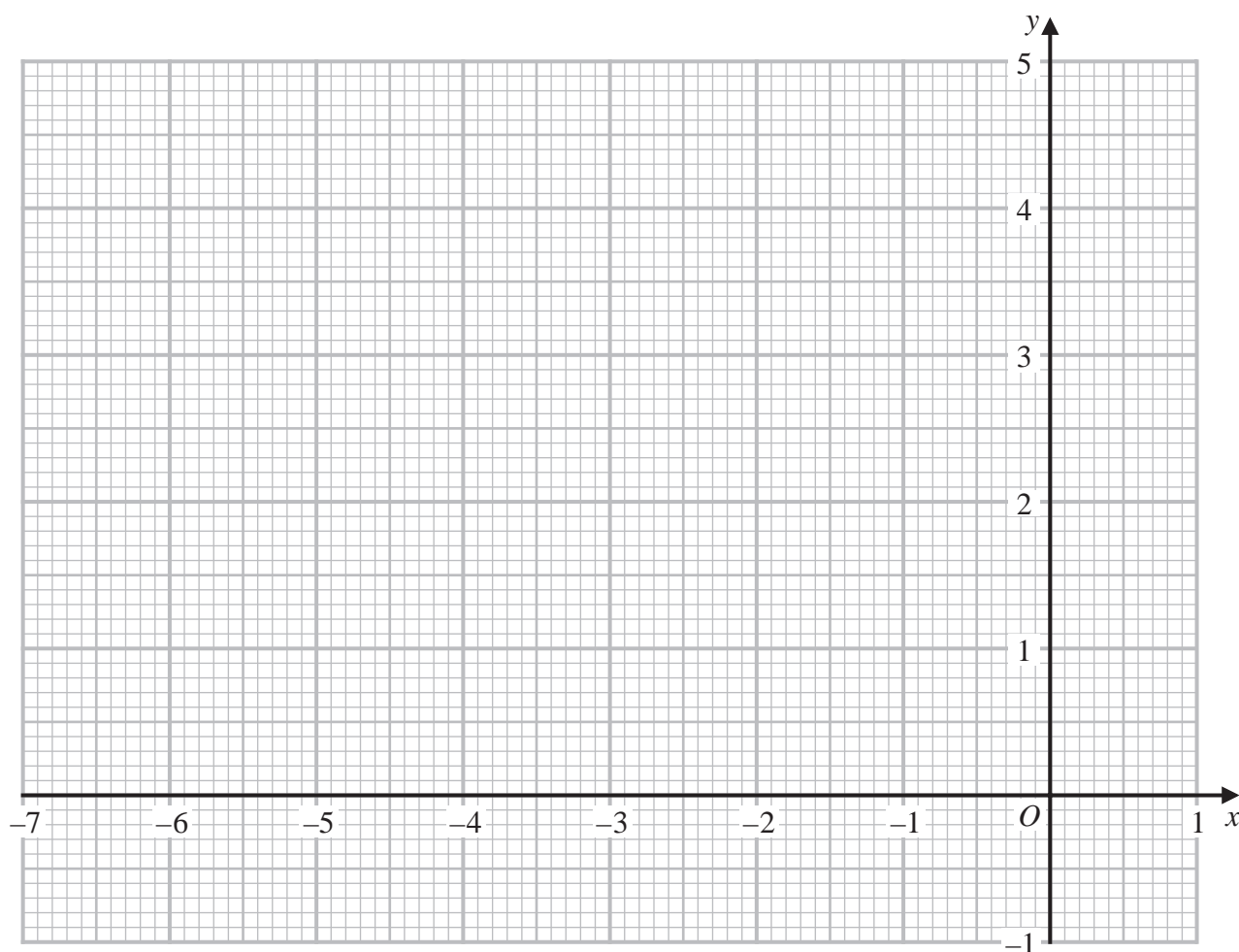
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Question 7 continued



Turn over for a spare grid if you need to redraw your graph.



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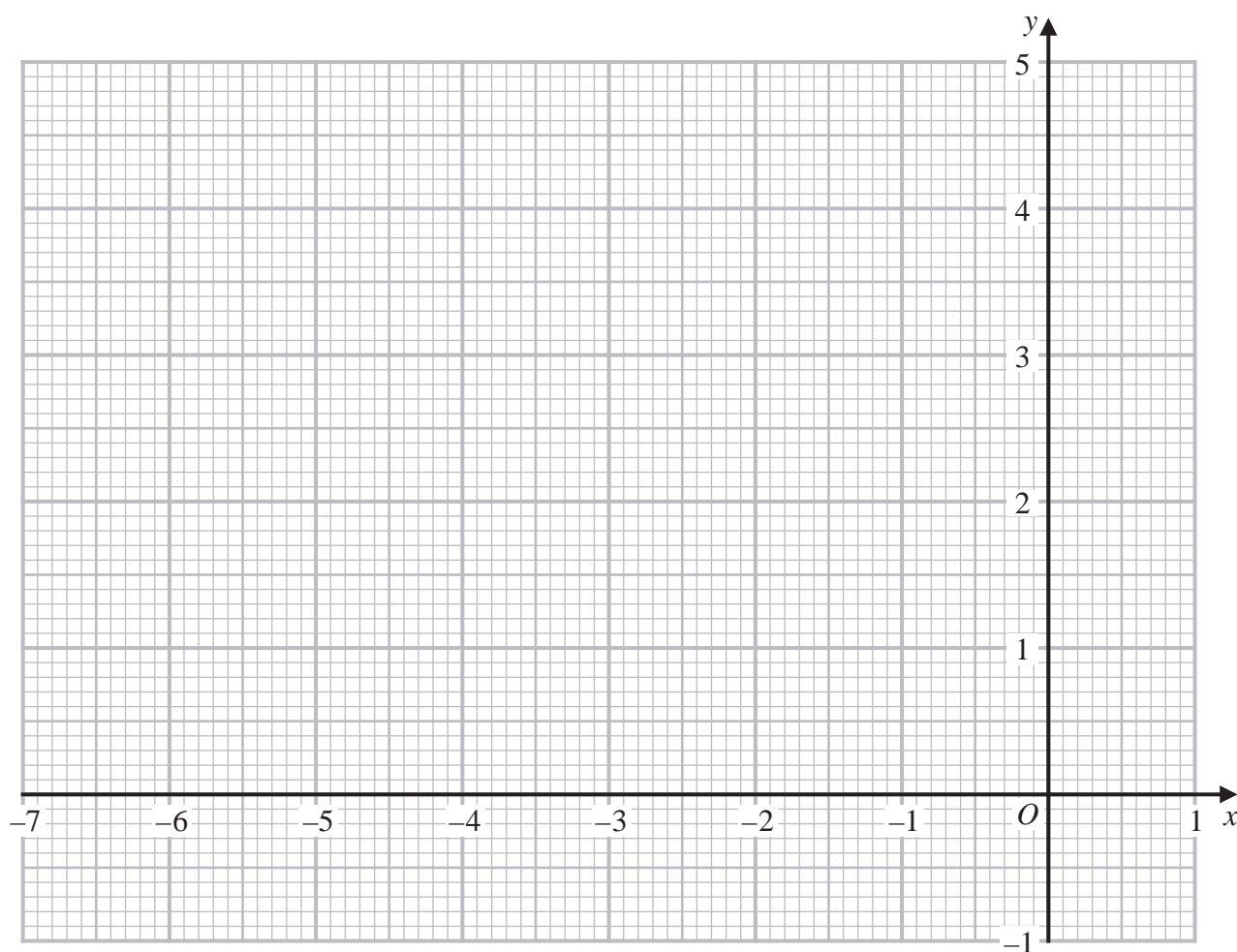
Question 7 continued

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Question 7 continued**Only use this grid if you need to redraw your graph.****(Total for Question 7 is 10 marks)**