

- 7 (a) Complete the table of values for $y = \ln(3x + 1) + 2$, giving your answers to 2 decimal places.

x	0	1	2	3	4	5	6
y	2		3.95	4.30			4.94

(2)

- (b) On the grid opposite, draw the graph of $y = \ln(3x + 1) + 2$ for $0 \leq x \leq 6$

(2)

- (c) Use your graph to obtain an estimate, to 1 decimal place, for the value of $\ln 10.6$
You **must** show clearly how you have used your graph.

(3)

- (d) By drawing a straight line on the grid, obtain estimates, to 1 decimal place, for the roots of the equation $(3x + 1)^2 = e^{(x+1)}$ in the interval $0 \leq x \leq 6$

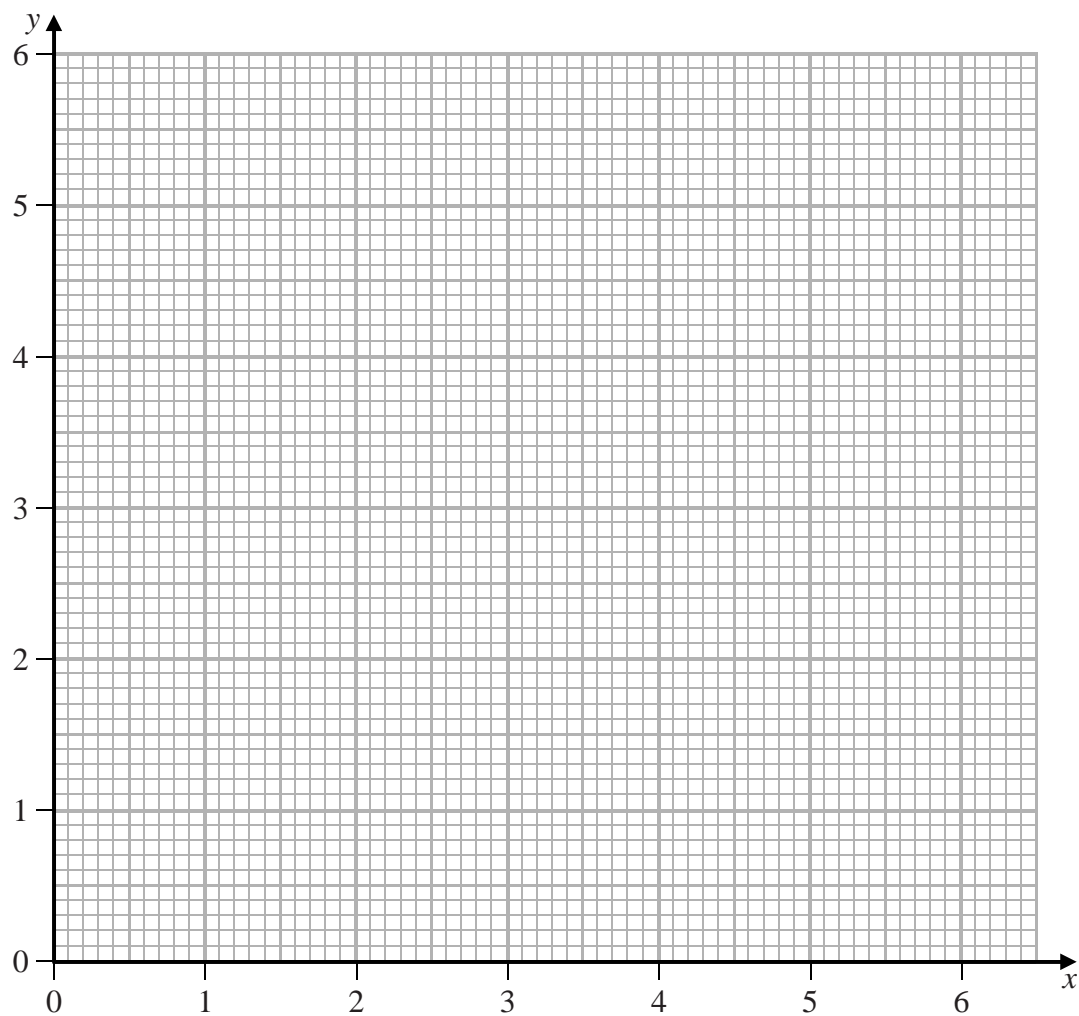
(5)

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Question 7 continued

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



Question 7 continued

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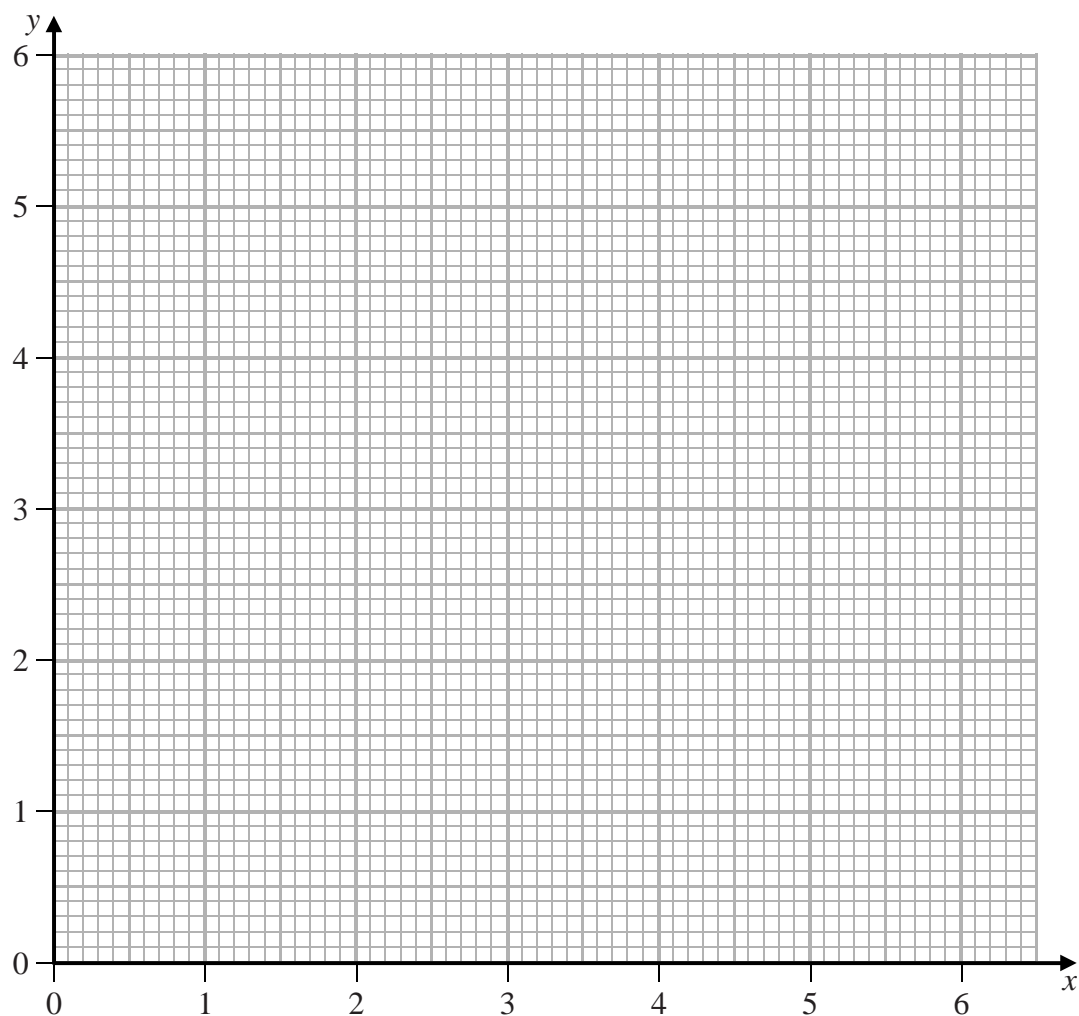
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Question 7 continued

Only use this grid if you need to redraw your graph.



(Total for Question 7 is 12 marks)

