

- 7 (a) Complete the table of values for $y = \ln(5x + 1) + 2$ giving your answers to 2 decimal places.

x	0	1	2	3	4	5	6	7
y	2		4.40	4.77	5.04		5.43	

(2)

- (b) On the grid opposite draw the graph of $y = \ln(5x + 1) + 2$ for $0 \leq x \leq 7$

(2)

- (c) By drawing an appropriate straight line on the grid, obtain an estimate, to 1 decimal place, of the positive root of the equation $\ln(5x + 1) - x = 0$ in the interval $0 \leq x \leq 7$

(3)

- (d) By drawing an appropriate straight line on the grid, obtain an estimate, to 1 decimal place, of the root of the equation $e^{(3x-1)} = 5x + 1$ in the interval $0 \leq x \leq 7$

(4)

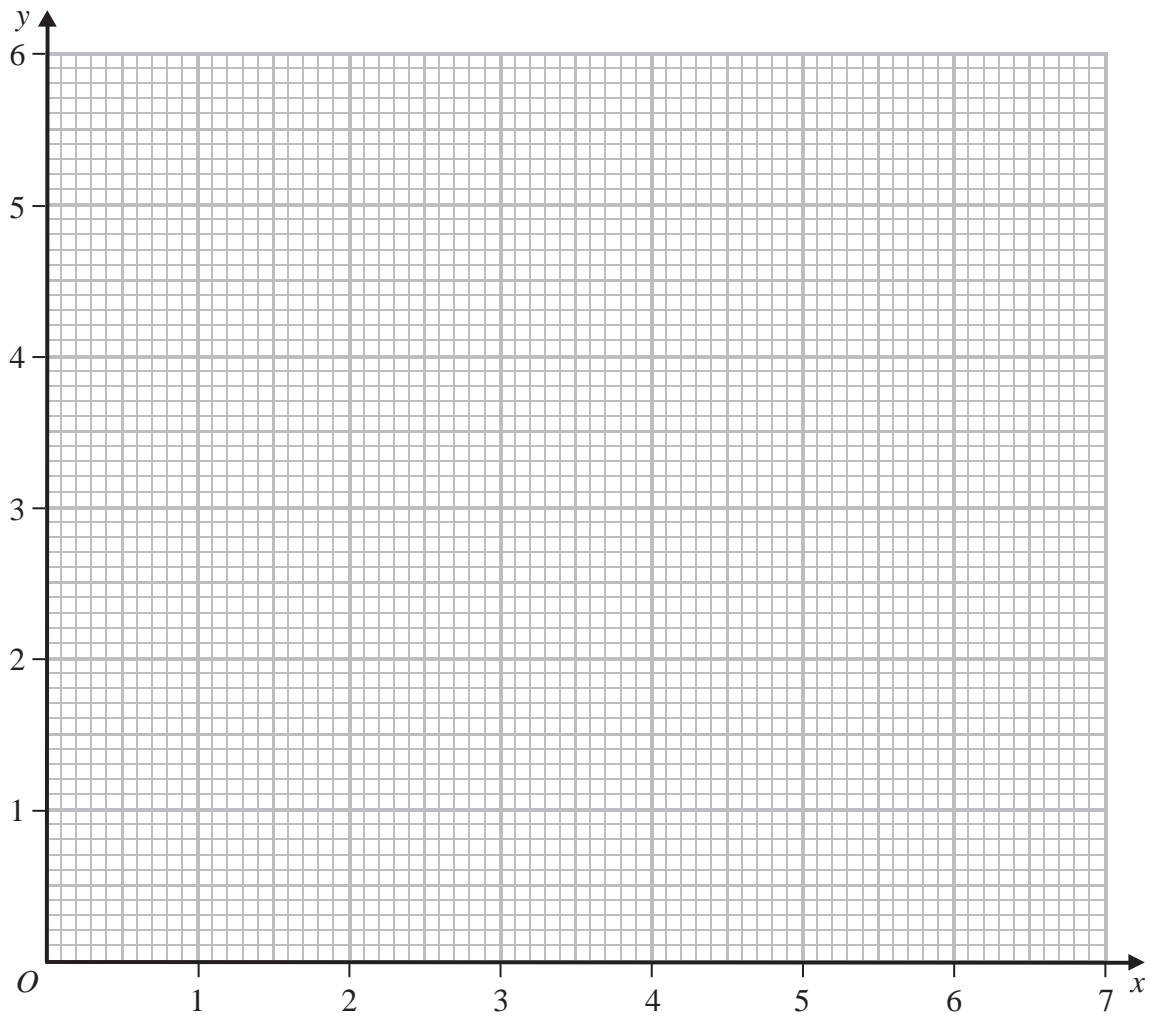
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Question 7 continued



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



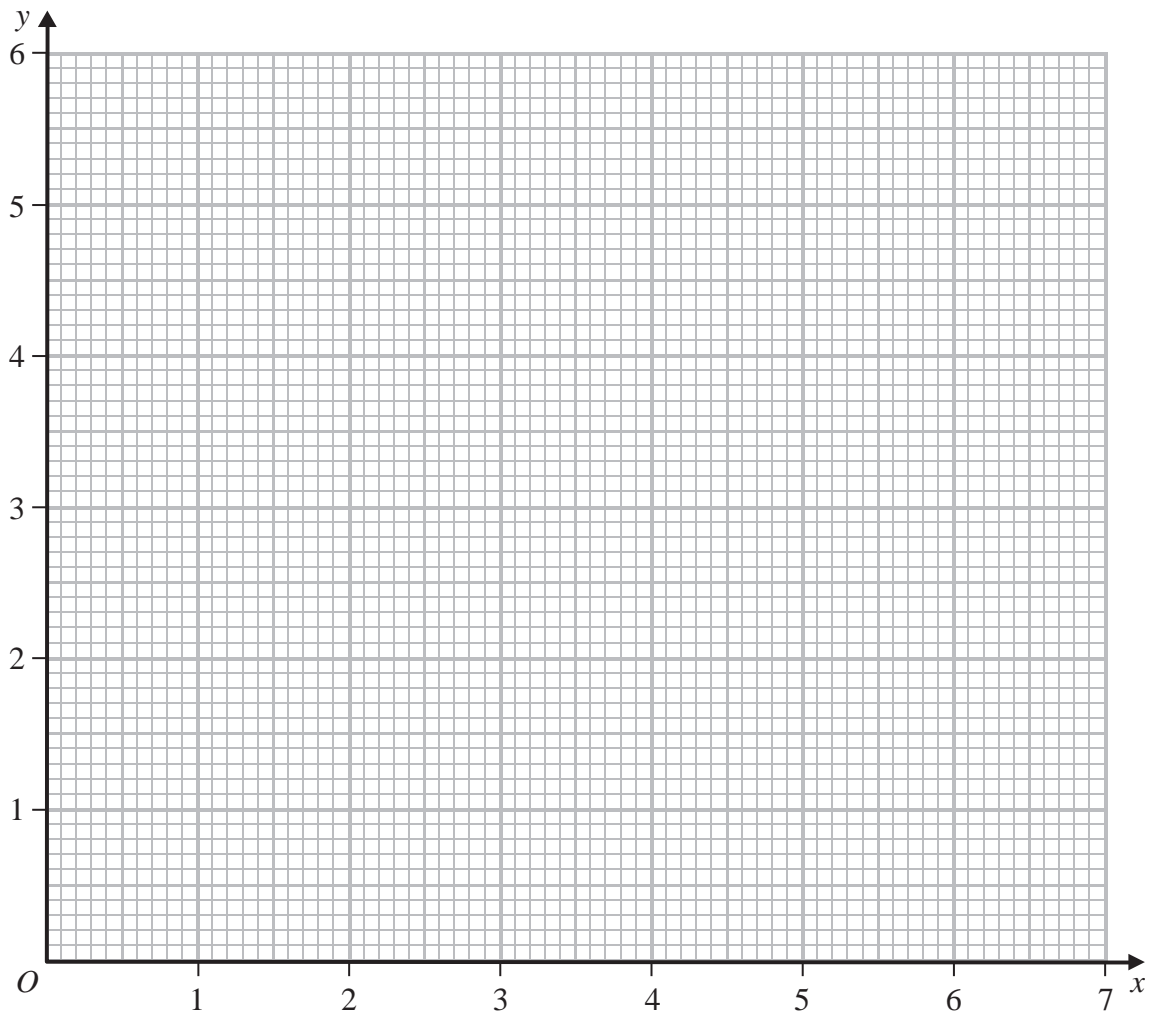
Question 7 continued

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Question 7 continued**Only use this grid if you need to redraw your graph****(Total for Question 7 is 11 marks)**