7 (a) Complete the table of values for $y = 3^{\frac{x}{4}} + 2$

Give your answers to 2 decimal places where appropriate.

(2)

x	0	1	2	3	4	5
y	3	3.32				5.95

(b) On the grid opposite, draw the graph of

$$y = 3^{\frac{x}{4}} + 2 \qquad \text{for} \quad 0 \leqslant x \leqslant 5$$

(2)

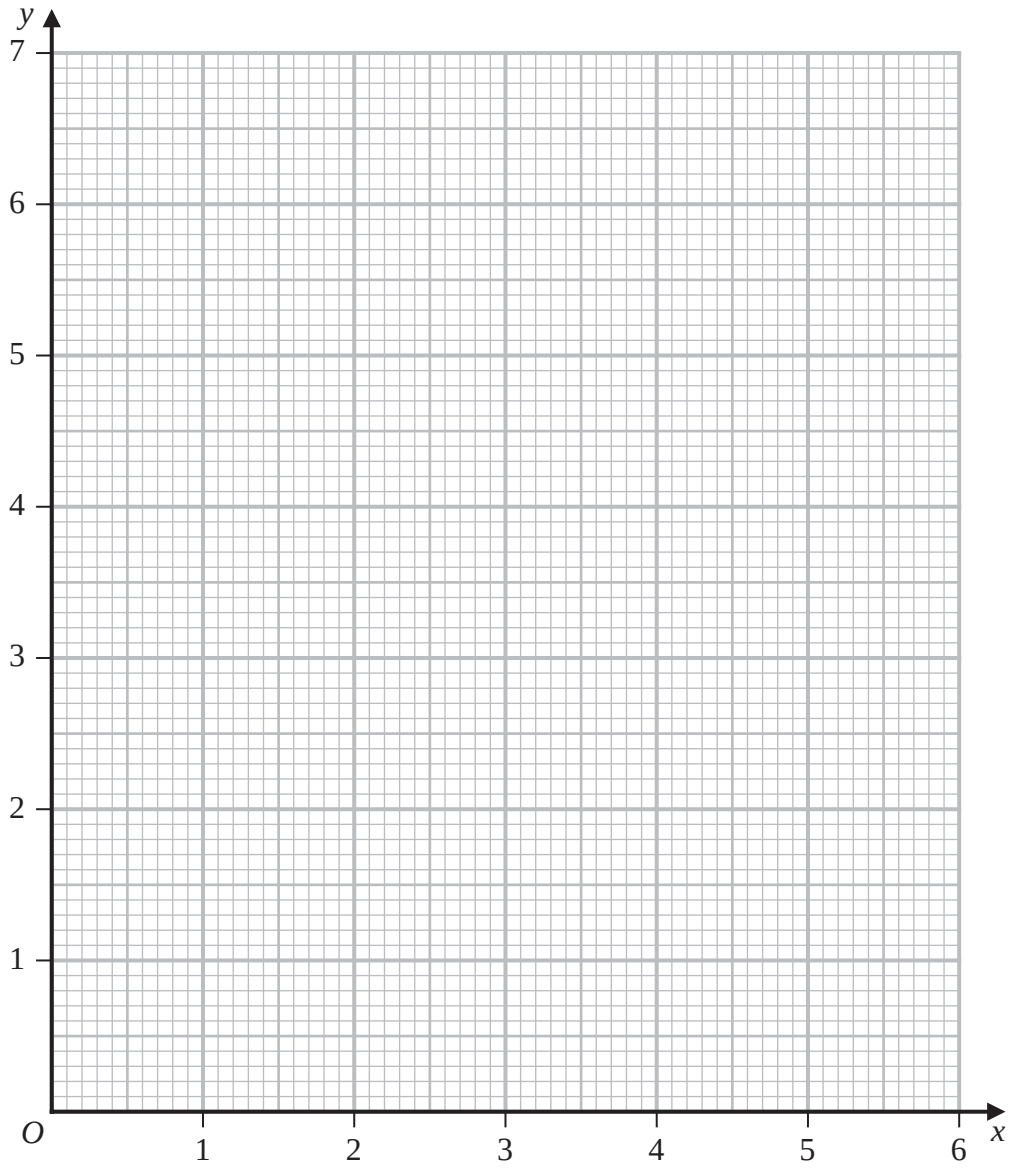
(c) By drawing a suitable straight line on the grid, obtain an estimate, to one decimal place, of the root of the equation

$$\log_3(6 - 2x)^4 - x = 0$$

in the interval $0 \leqslant x \leqslant 5$

(5)

Question 7 continued

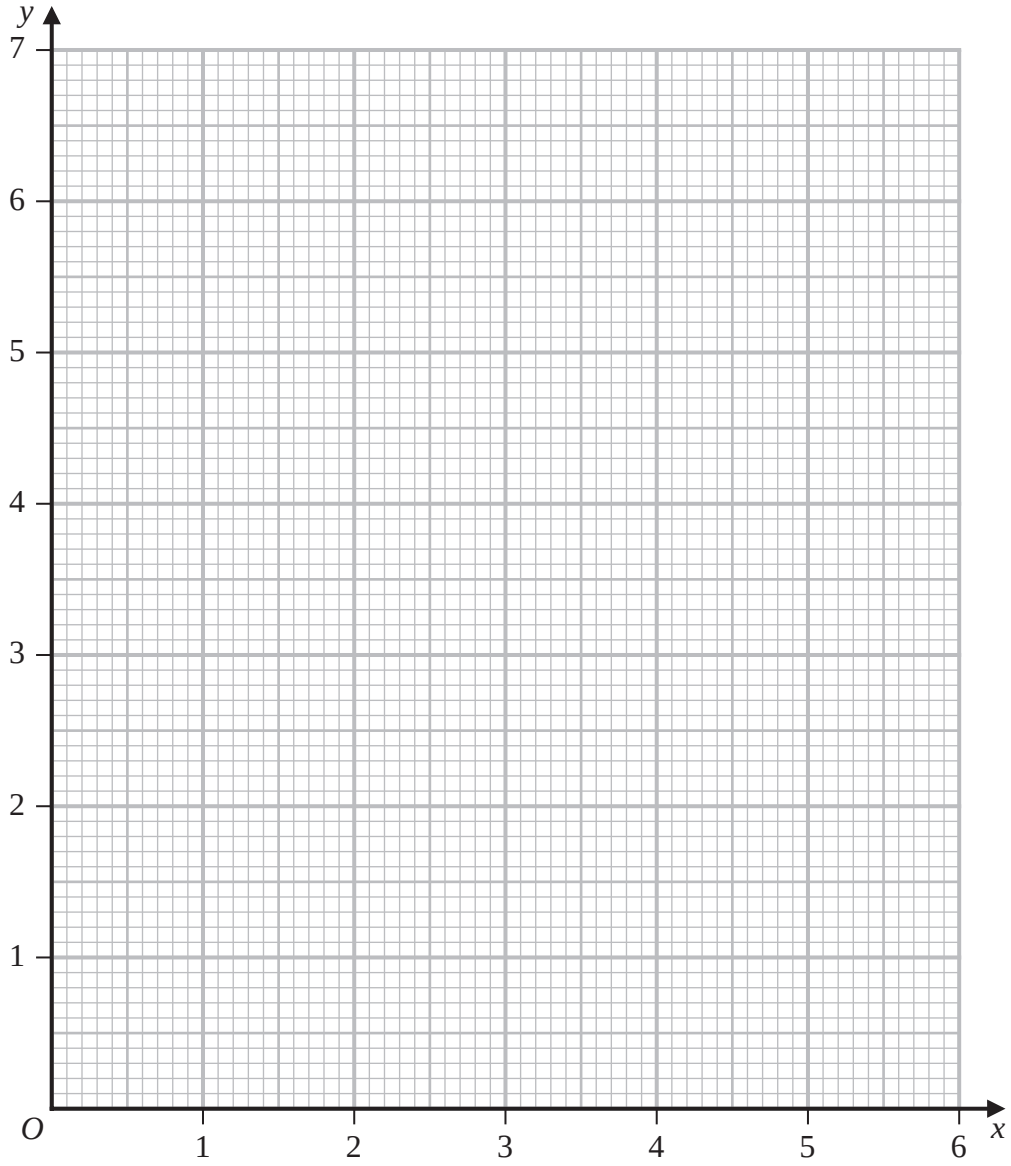


Turn over for a spare grid if you need to redraw your graph.

Question 7 continued

Question 7 continued

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



(Total for Question 7 is 9 marks)