

- 5 The grid opposite shows the graph of $y = 3x \sin x$ for $-1 \leq x \leq 3$, where x is measured in radians.

(a) Use the graph to estimate, to 1 decimal place, the roots of the equation

$$x \sin x = 1$$

in the interval $-1 \leq x \leq 3$

(3)

(b) By drawing a suitable straight line on the grid, obtain estimates, to 1 decimal place, of the roots of the equation

$$2x \sin x - x = 1$$

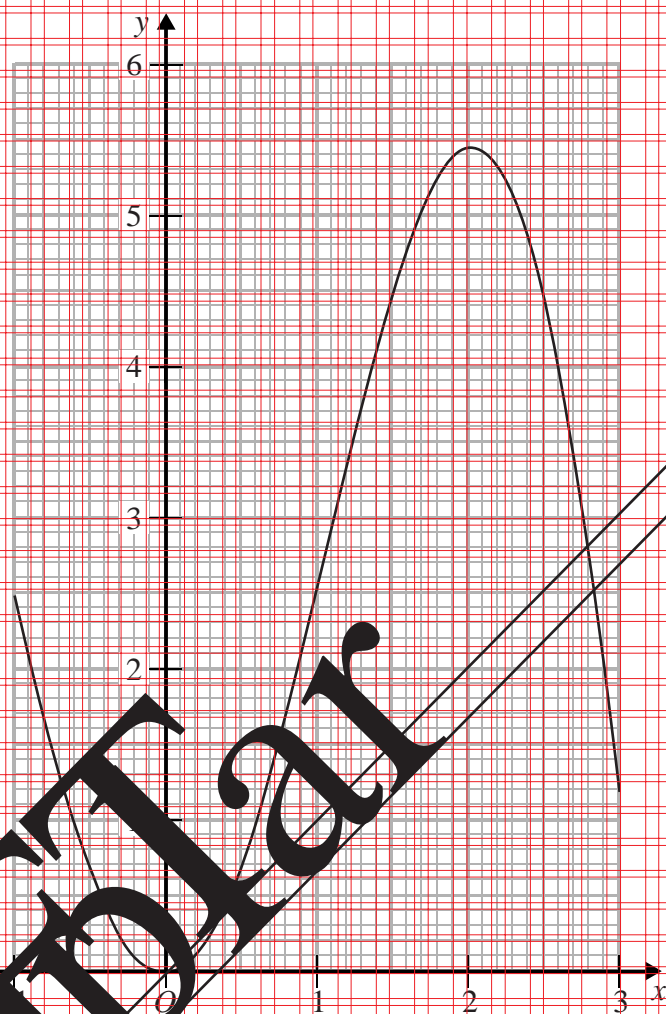
in the interval $-1 \leq x \leq 3$

(5)



Question 5 continued

Graph for Question 5



(Total for Question 5 is 8 marks)

