

6 The curve C has equation

$$y = x^2 + 2x + \frac{4}{x} \quad x \neq 0$$

(a) Complete the table of values for C

x	-4	-2	-1	-0.5	0.5	1	2	4
y				-8.75		7	10	25

(2)

(b) On the grid opposite, plot the points from your completed table.

(1)

The curve has one turning point and this has coordinates (1, 7)

(c) Use your points to draw the graph of $y = x^2 + 2x + \frac{4}{x} \quad x \neq 0$

(1)

(d) Using your graph, find an estimate, to one decimal place, for the solution of the equation

$$x^2 + 2x + \frac{4}{x} = 0$$

(1)

(e) By drawing a suitable line on the grid estimate, to one decimal place, the solutions of the equation

$$x^2 + 2x + \frac{4}{x} = 5x + \frac{3}{2}$$

(3)

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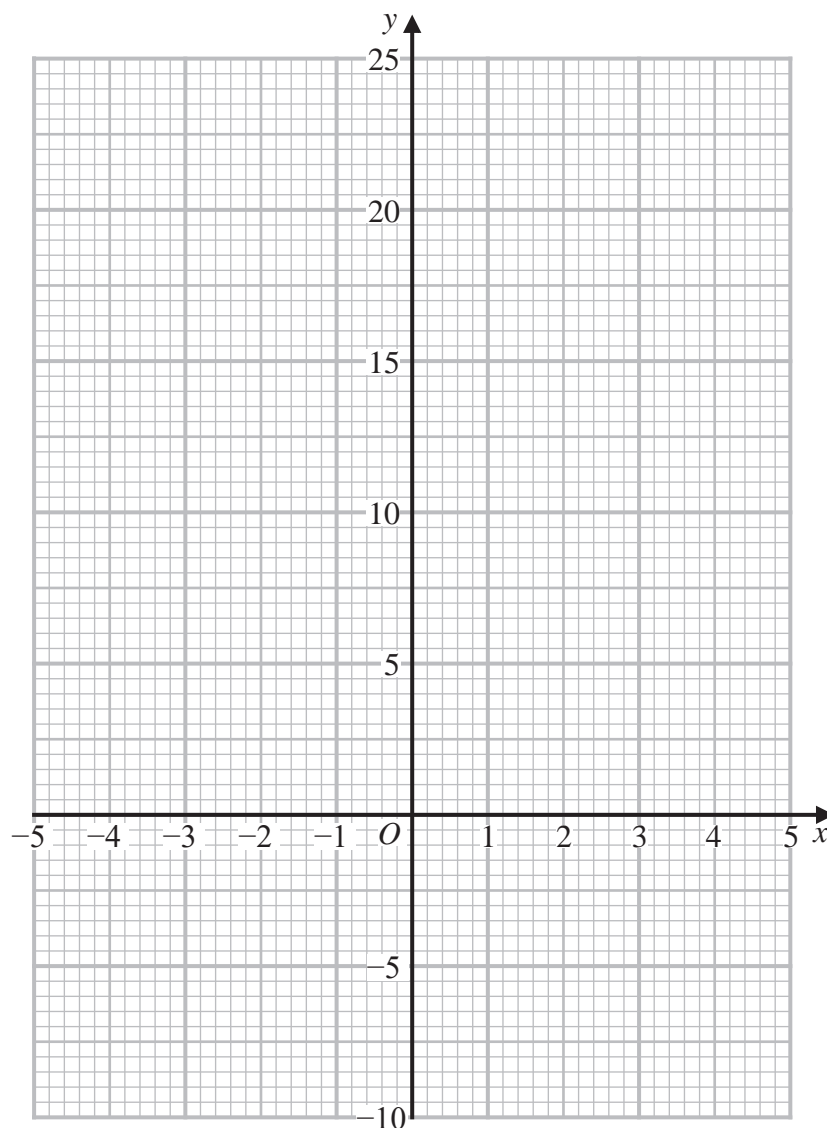


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Question 6 continued



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



Question 6 continued

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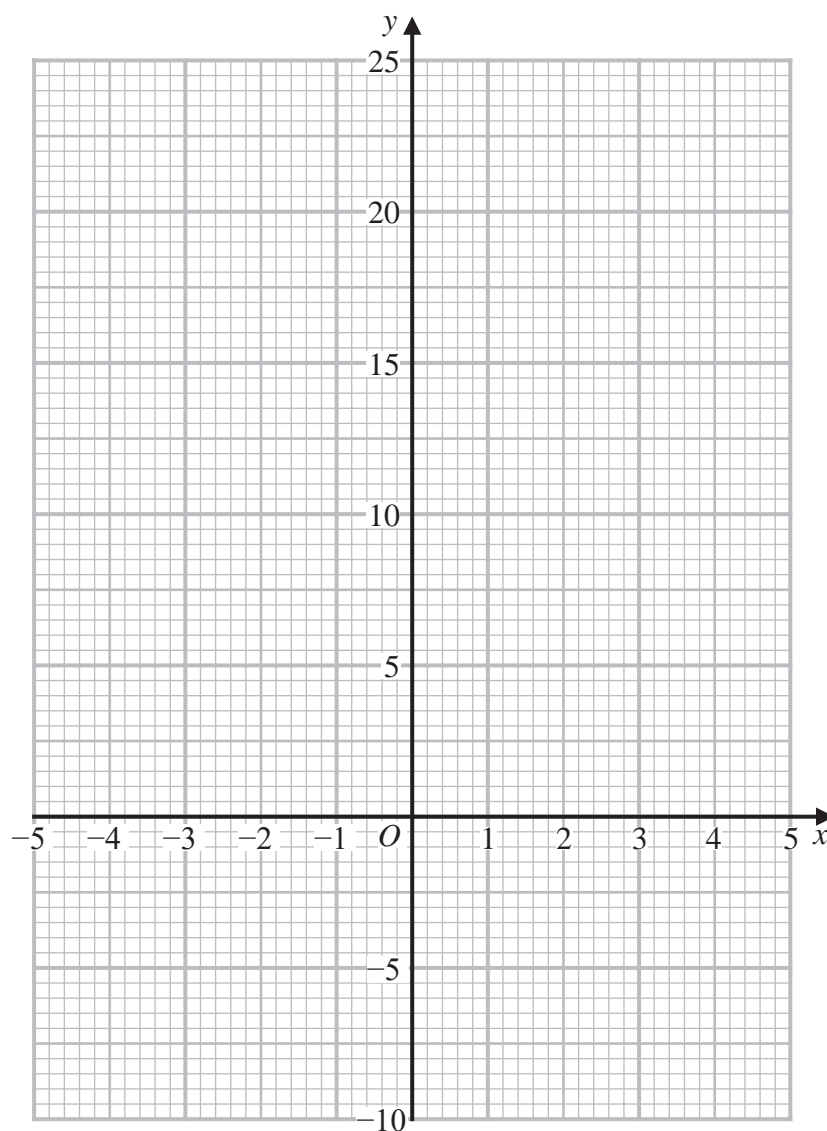
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Question 6 continued

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



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(Total for Question 6 is 8 marks)

