4 (a) Complete the table of values for $y = 2x + 1 + \dfrac{2}{x^2}$

Give your answers to 2 decimal places where appropriate.

x	0.5	1	1.5	2	2.5	3	3.5
y		5			6.32		8.16

(2)

(b) On the grid opposite, draw the graph of $y = 2x + 1 + \dfrac{2}{x^2}$ for $0.5 \leqslant x \leqslant 3.5$

(2)

(c) Use your graph to obtain estimates, to 1 decimal place, of the roots of the equation

$$2x + \frac{2}{x^2} = 7 \quad \text{in the interval } 0.5 \leqslant x \leqslant 3.5$$

(2)

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

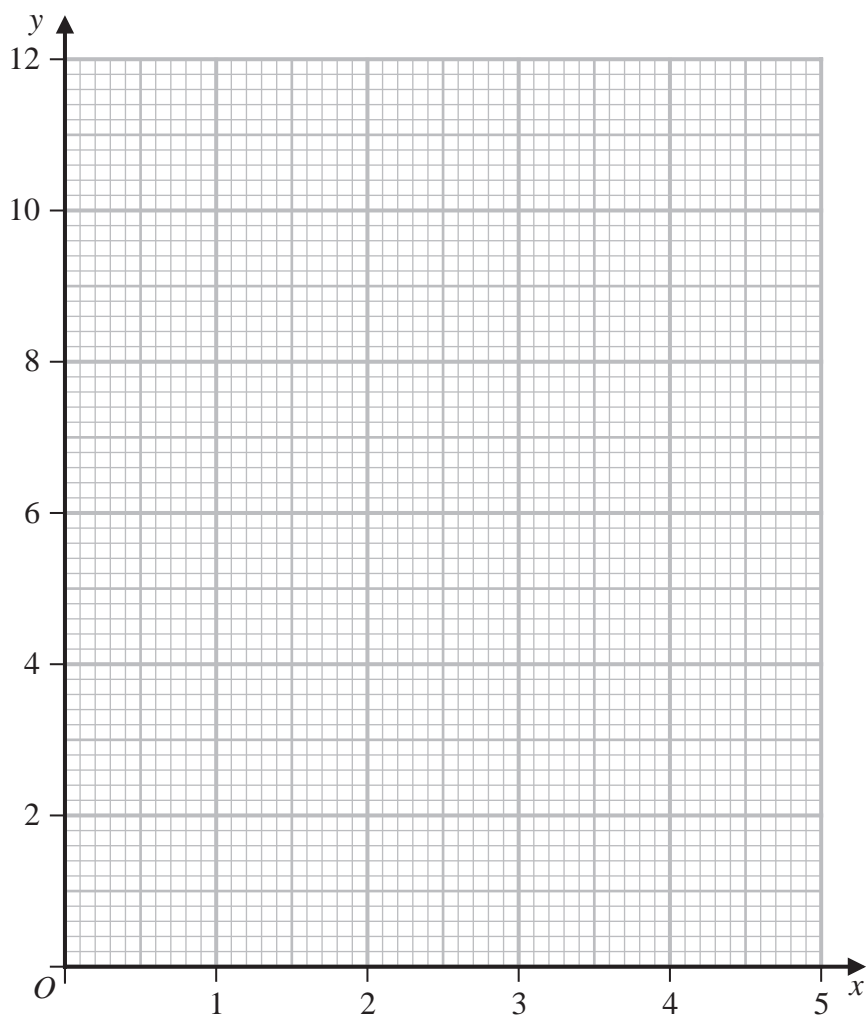$$\frac{3x}{2} + \frac{2}{x^2} = 5 \quad \text{in the interval } 0.5 \leqslant x \leqslant 3.5$$

(5)

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Question 4 continued

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

Question 4 continued

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Question 4 continued

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

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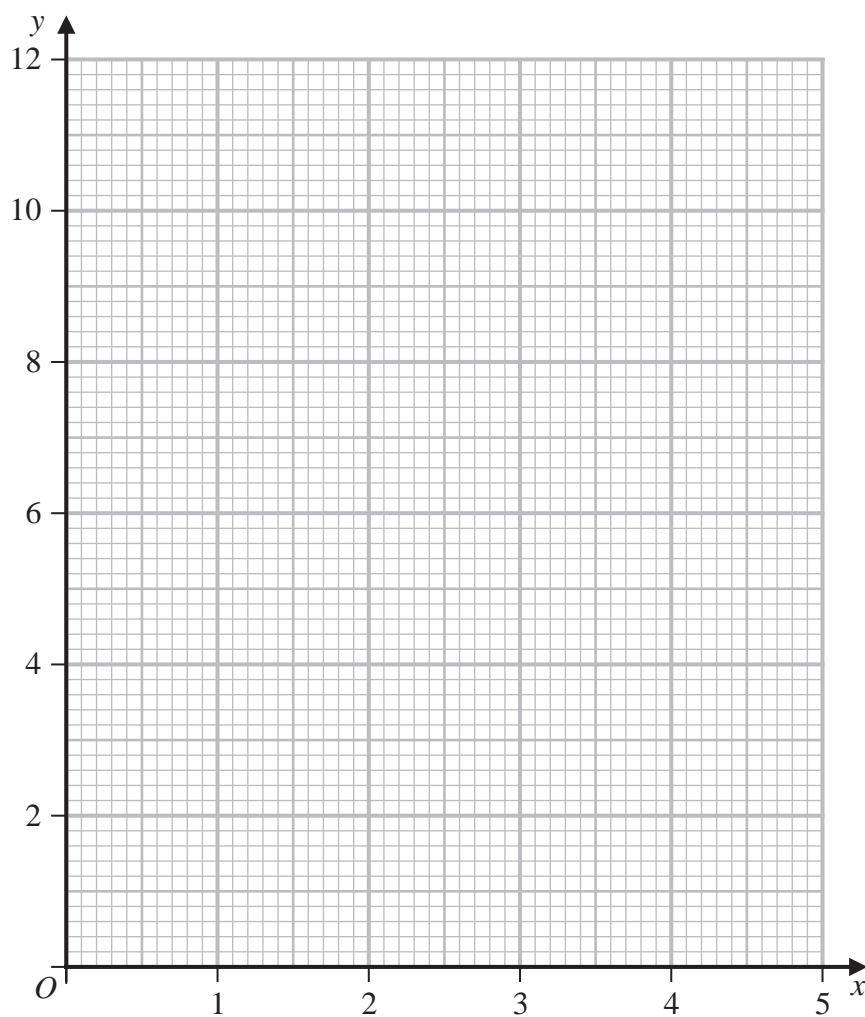
(Total for Question 4 is 11 marks)