3 The equation of a curve is $y = -2x^3 + 6x + \frac{5}{x^2}$

(a) Complete the table of values for $y = -2x^3 + 6x + \frac{5}{x^2}$

Give your values of y to 2 decimal places where necessary.

x	−2	−1.8	−1.7	−1.6	−1.4	−1.2	−1	−0.9	−0.8
y	5.25	2.41		0.55	−0.36		1		4.04

(2)

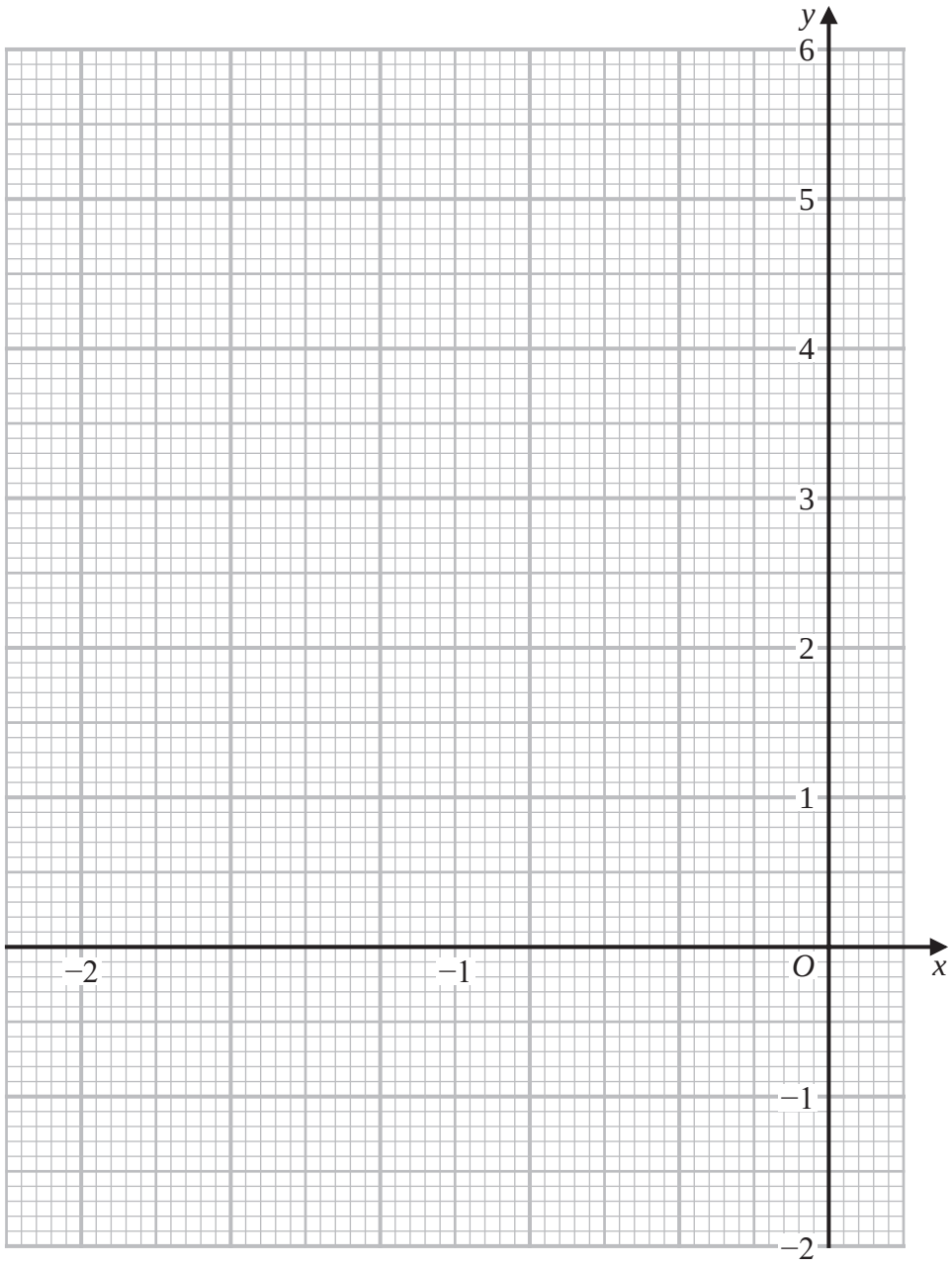
(b) On the grid opposite, plot the points from your completed table and join them to form a smooth curve.

(3)

(c) Use your graph to find an estimate, to 2 decimal places, for the minimum value of $-2x^3 + 6x + \frac{5}{x^2}$ for values of x in $-2 \leqslant x \leqslant -0.8$

(1)

Question 3 continued

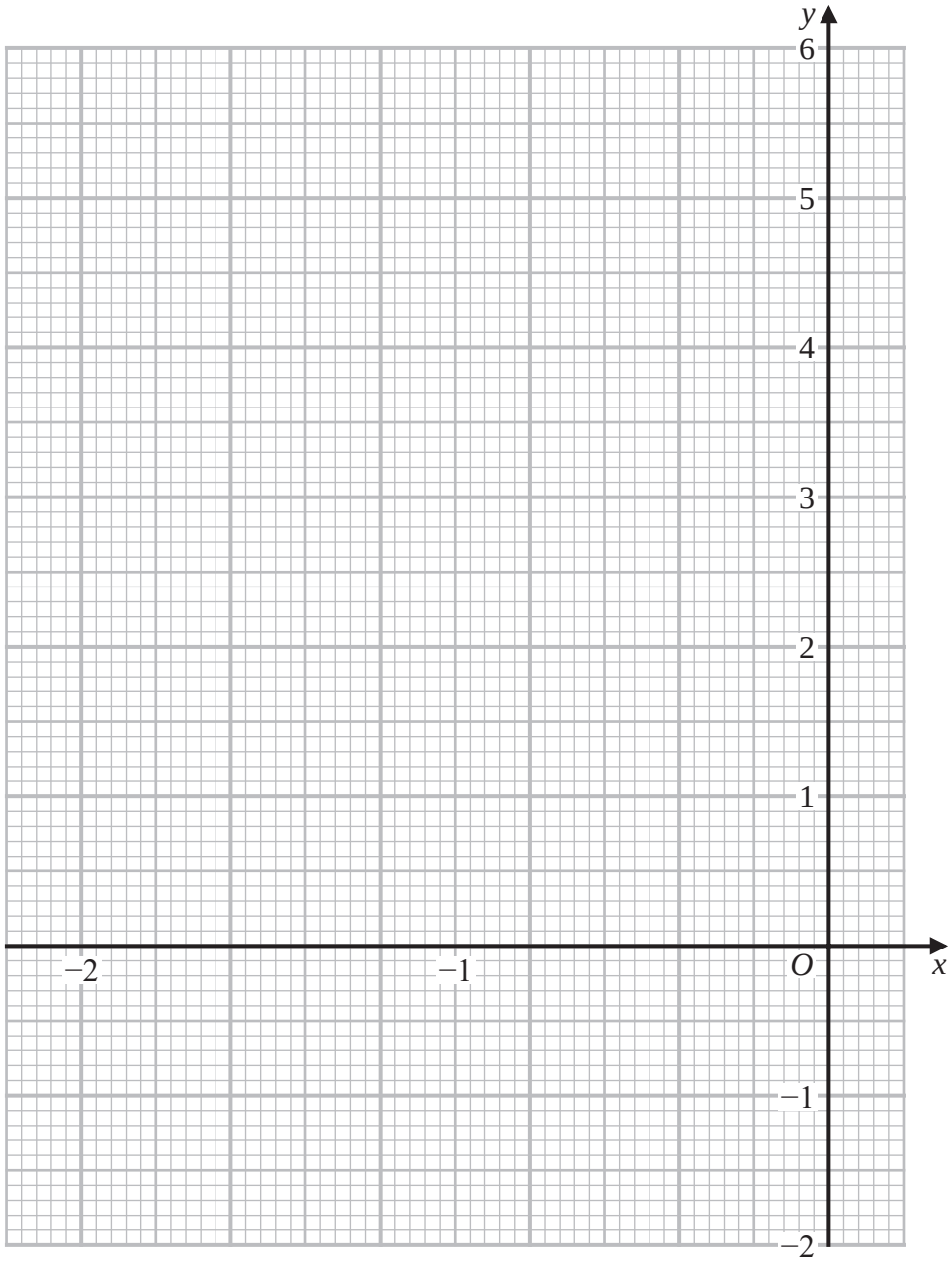


Turn over for a spare grid if you need to redraw your curve.

Question 3 continued

Question 3 continued

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



(Total for Question 3 is 6 marks)