1

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

x	−3	−2	−1	0	1	2	3
y	7.5				−2.5		4.5

(2)

(b) On the grid, draw the graph of $y = x^2 - \dfrac{x}{2} - 3$ for values of x from −3 to 3
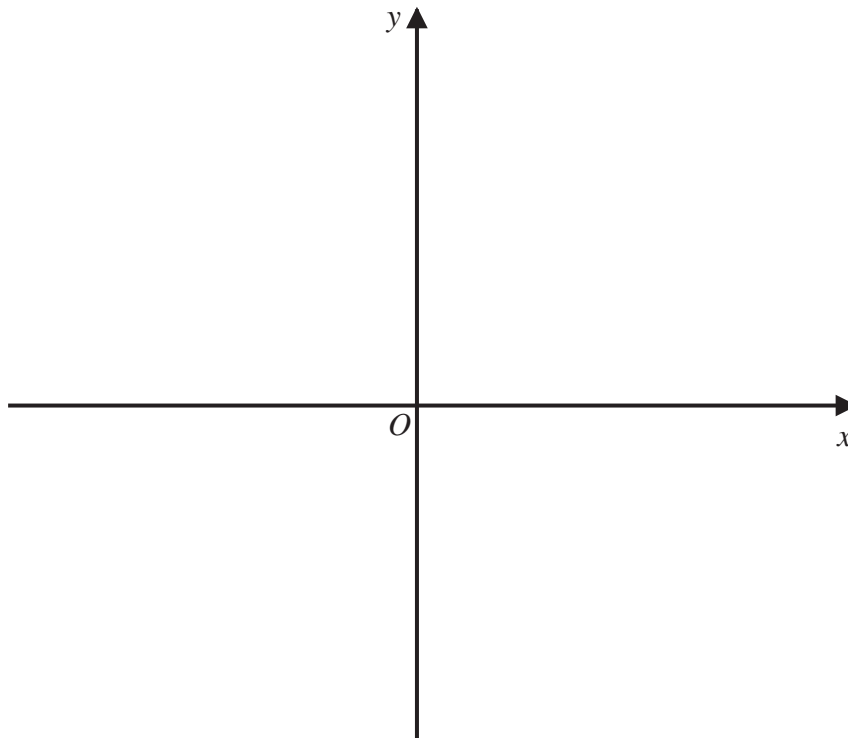

(2)
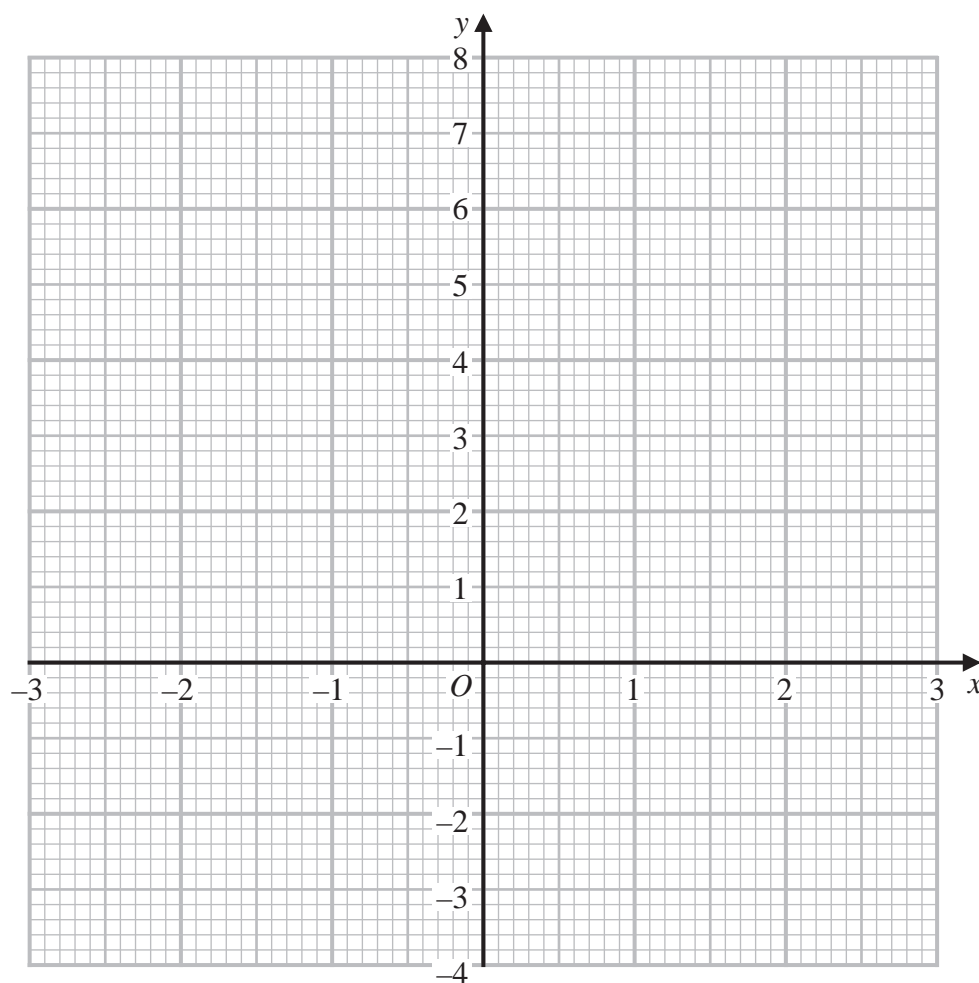
(Total for Question 1 is 4 marks)

2 The curve **C** has equation $y = 4(x - 1)^2 - a$ where $a > 4$

Using the axes below, sketch the curve **C**.
On your sketch show clearly, in terms of a,

(i) the coordinates of any points of intersection of **C** with the coordinate axes,
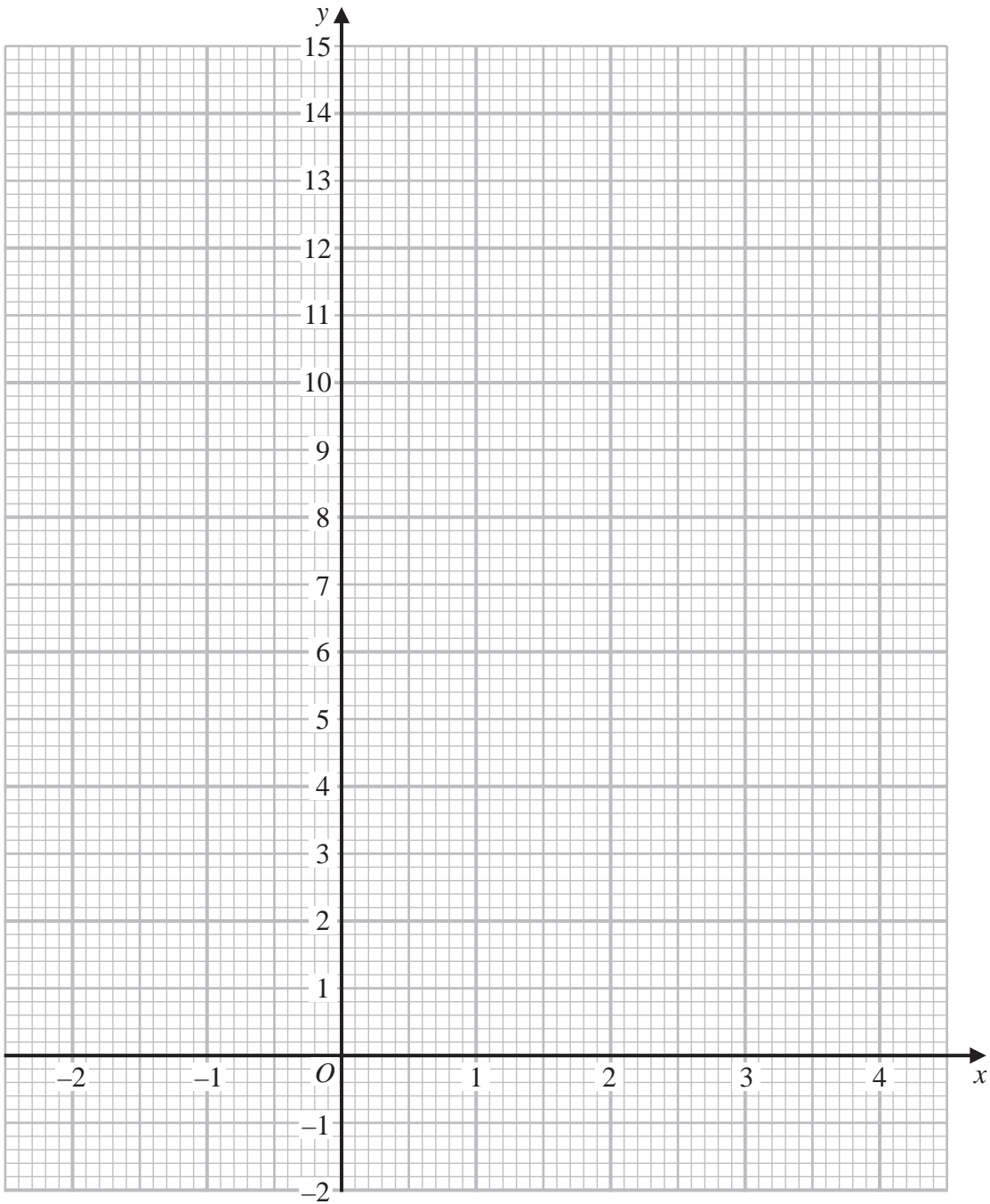
(ii) the coordinates of the turning point.

(Total for Question 2 is 4 marks)

3   (a) Complete the table of values for $y = x^2 - 4x + 3$

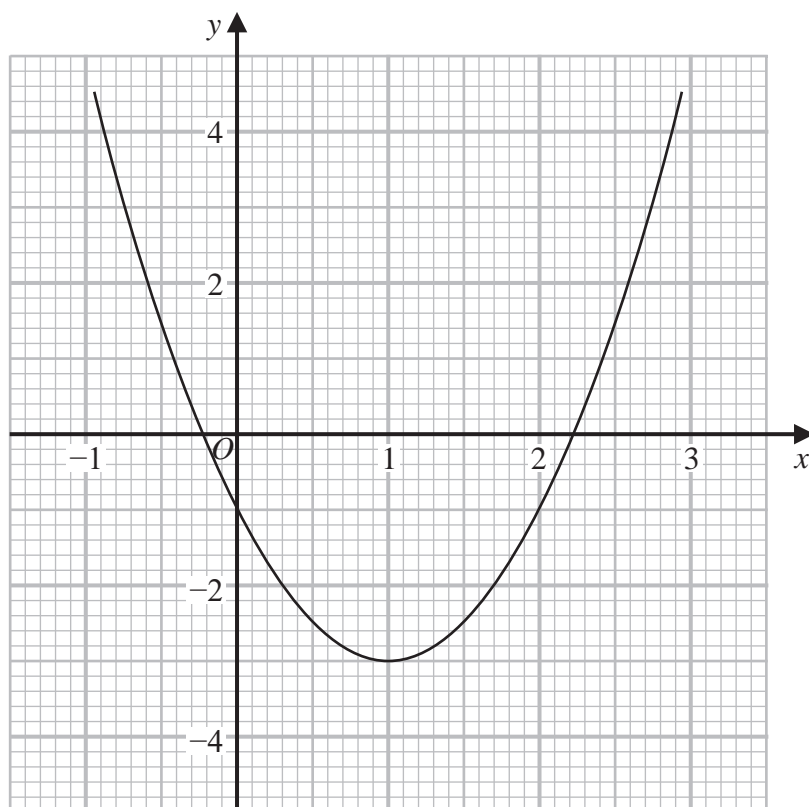| x	-2	-1	0	1	2	3	4
y		8	3			0	

(2)

(b) On the grid, draw the graph of $y = x^2 - 4x + 3$ for values of x from -2 to 4

(2)

(Total for Question 3 is 4 marks)

4 Part of the graph of $y = 2x^2 - 4x - 1$ is shown on the grid.

(a) Use the graph to find estimates for the solutions of the equation $2x^2 - 4x - 1 = 0$
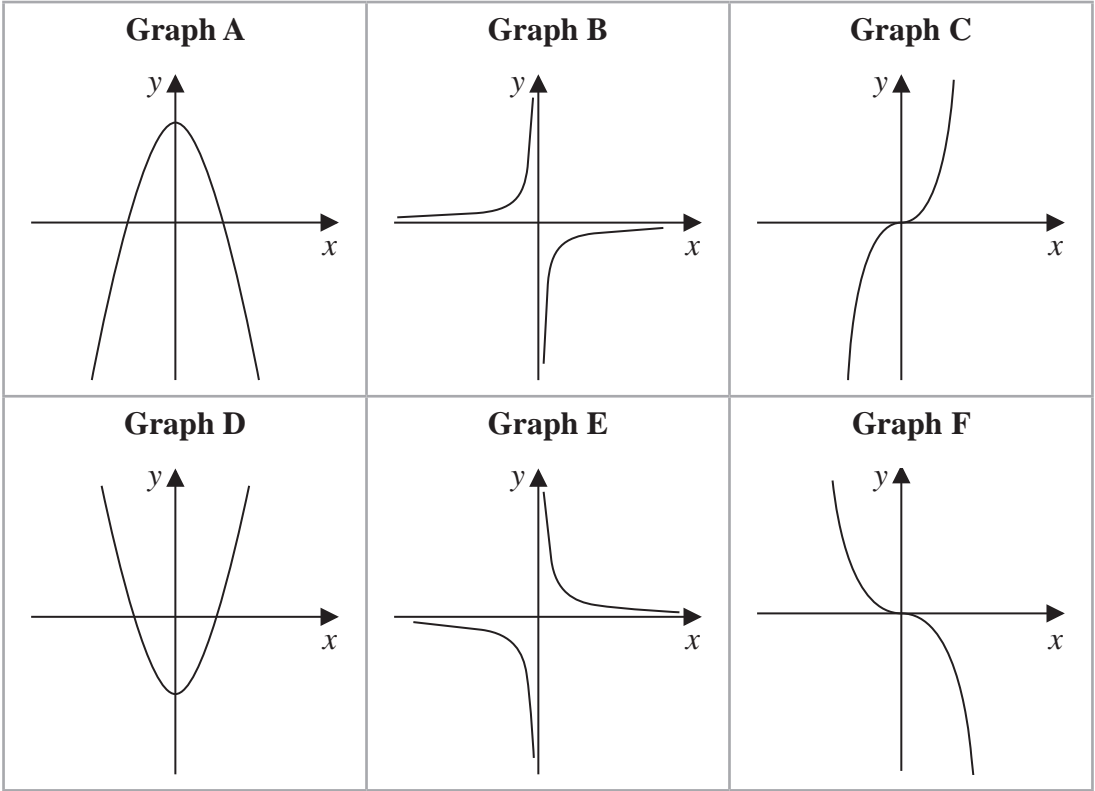
Give your solutions correct to one decimal place.

....

(2)

(b) By drawing a suitable straight line on the grid, find estimates for the solutions of the
equation $x^2 - x - 1 = 0$

Show your working clearly.

Give your solutions correct to one decimal place.

....

(3)

(Total for Question 4 is 5 marks)

5 Here are six graphs.

Graph A	Graph B	Graph C
Graph D	**Graph E**	**Graph F**

Complete the table below with the letter of the graph that could represent each given equation.

Write your answers on the dotted lines.

Equation	Graph
$y = -\dfrac{2}{x}$	....
$y = 5 - x^2$	....
$y = -2x^3$	....

(Total for Question 5 is 3 marks)

6 (a) Complete the table of values for $y = x^2 - x - 4$

x	–3	–2	–1	0	1	2	3
y		2			–4		

(2)

(b) On the grid below, draw the graph of $y = x^2 - x - 4$ for values of x from –3 to 3

(2)
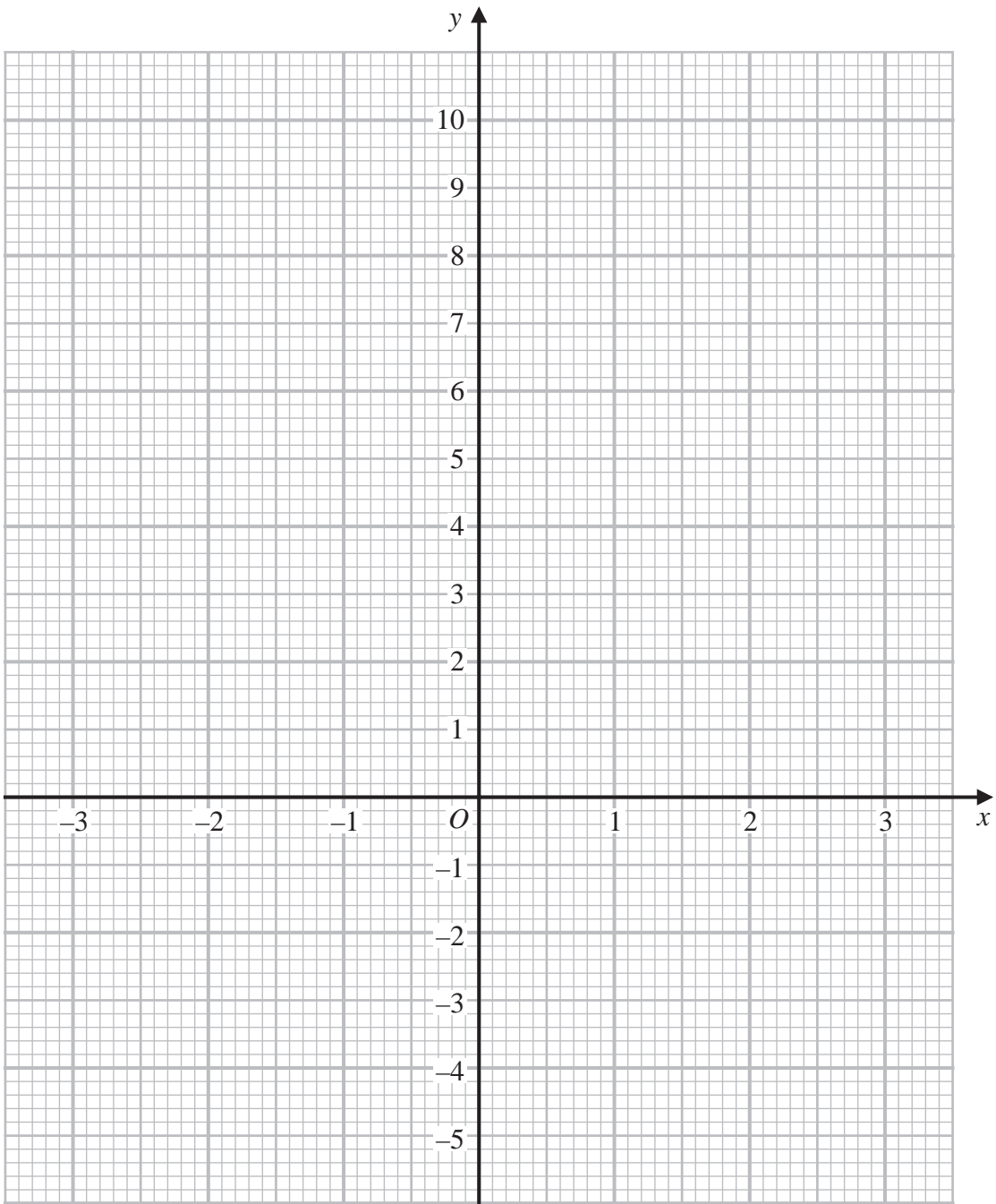
(Total for Question 6 is 4 marks)