

Write your name here

Surname

Other names

In the style of:

Edexcel GCSE

Centre Number

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Candidate Number

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Mathematics A

Quadratic Graphs

Higher Tier

Past Paper Style Questions
Arranged by Topic

Paper Reference

1MA0/1H

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators must not be used.**



Information

- The total mark for this paper is 100
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►



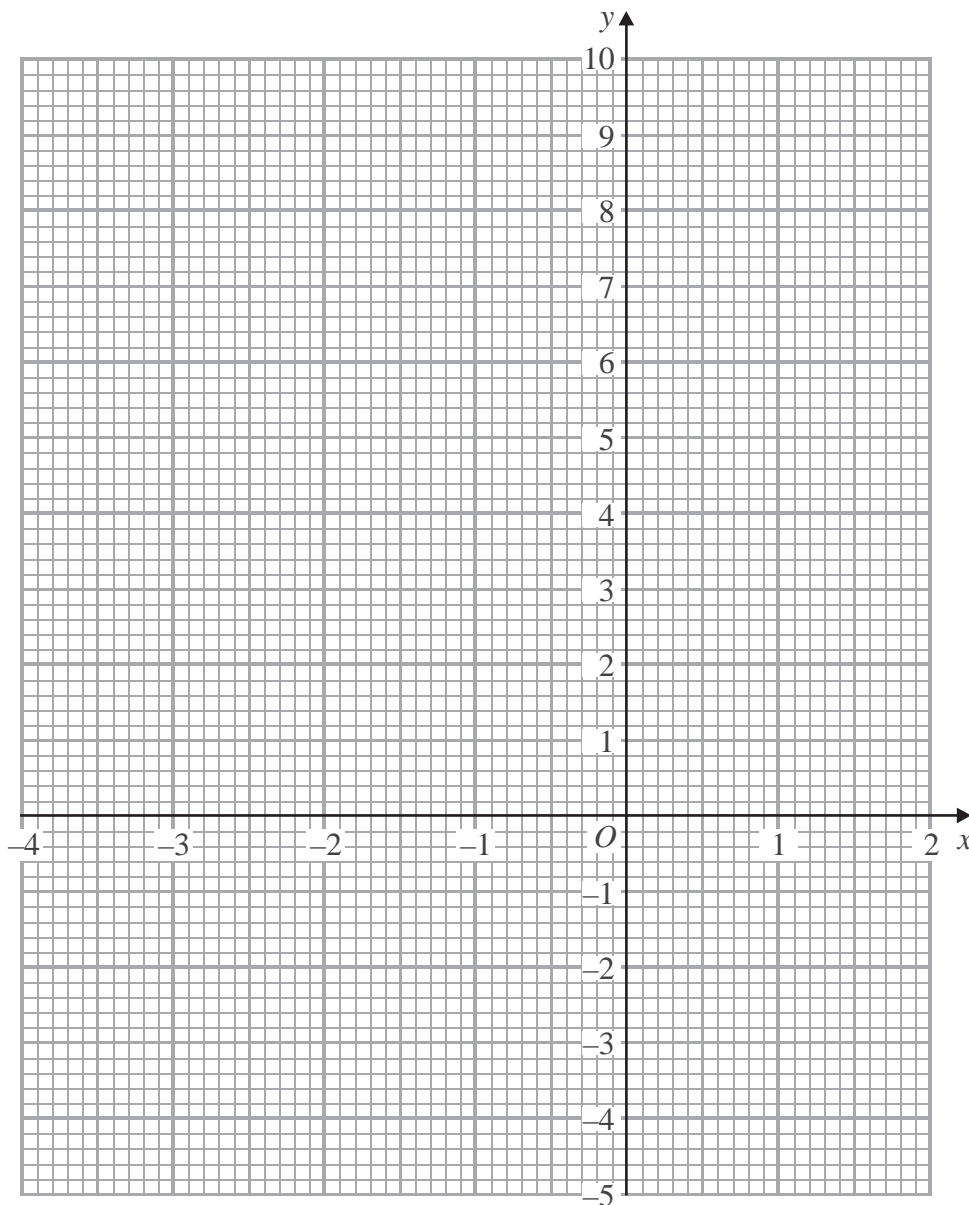
1. (a) Complete the table of values for $y = x^2 + x - 2$

x	-4	-3	-2	-1	0	1	2
y	10		0	-2			4

(2)

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

(2)



(c) Use your graph to find estimates for the solutions of $x^2 + x - 2 = 0$

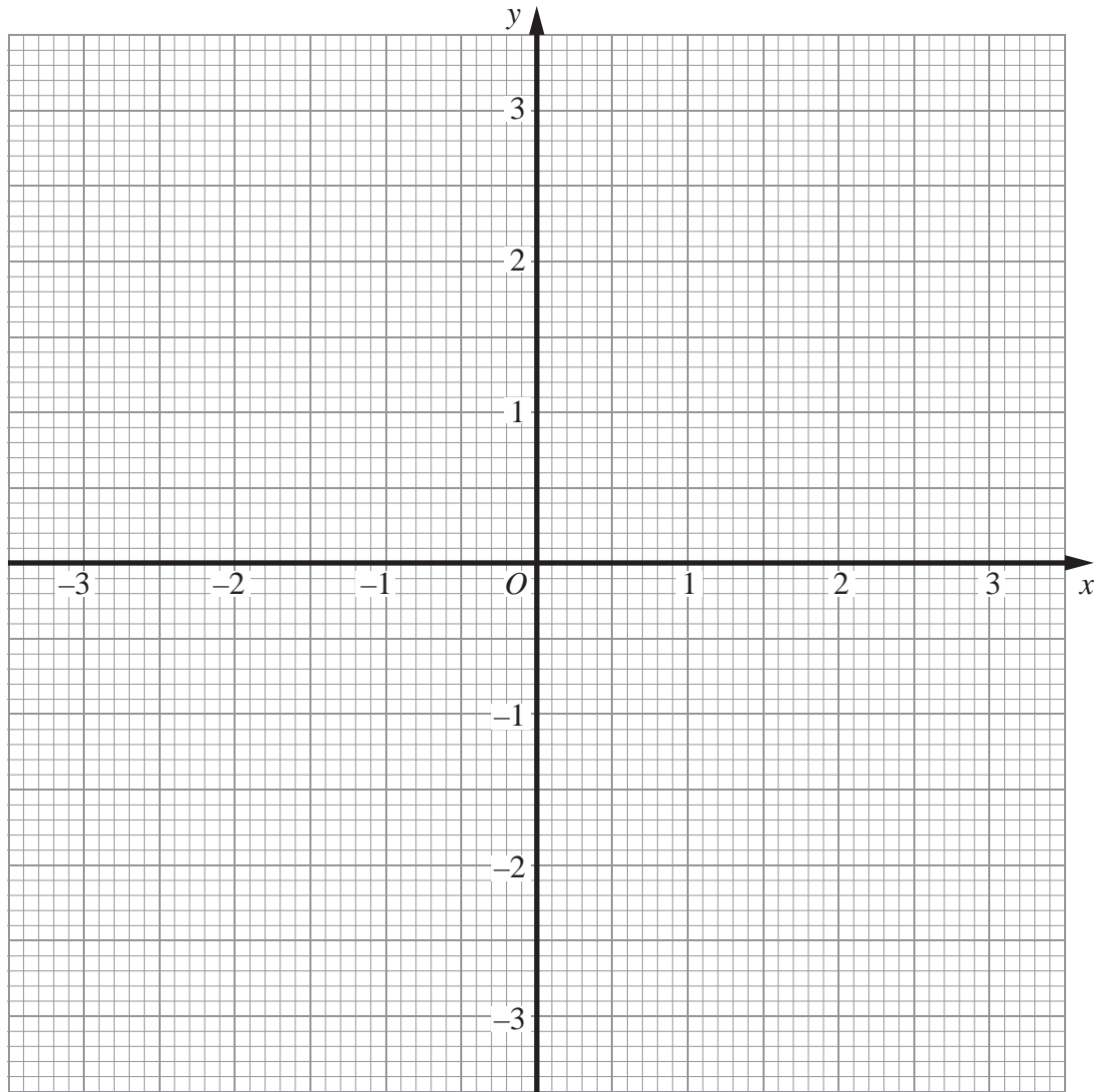
$x = \dots\dots\dots$

$x = \dots\dots\dots$
(1)

(Total 5 marks)



2. (a) Construct the graph of $x^2 + y^2 = 9$



(2)

(b) By drawing the line $x + y = 2$ on the grid, solve the equations $x^2 + y^2 = 9$
 $x + y = 2$

$x = \dots\dots\dots$, $y = \dots\dots\dots$

or $x = \dots\dots\dots$, $y = \dots\dots\dots$

(3)

(Total 5 marks)

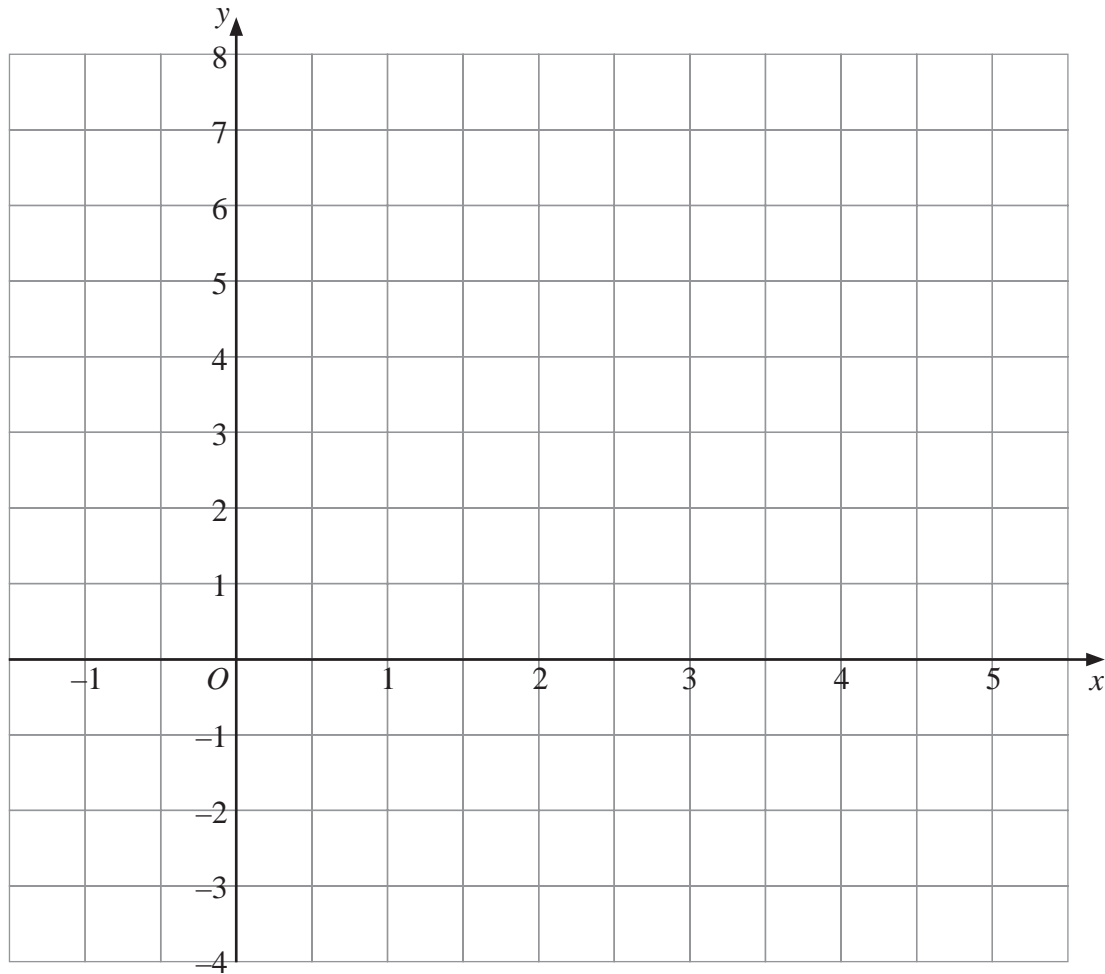


3. (a) Complete the table of values for $y = x^2 - 4x + 1$

x	-1	0	1	2	3	4	5
y		1	-2		-2		6

(2)

(b) On the grid, draw the graph of $y = x^2 - 4x + 1$



(2)

(Total 4 marks)

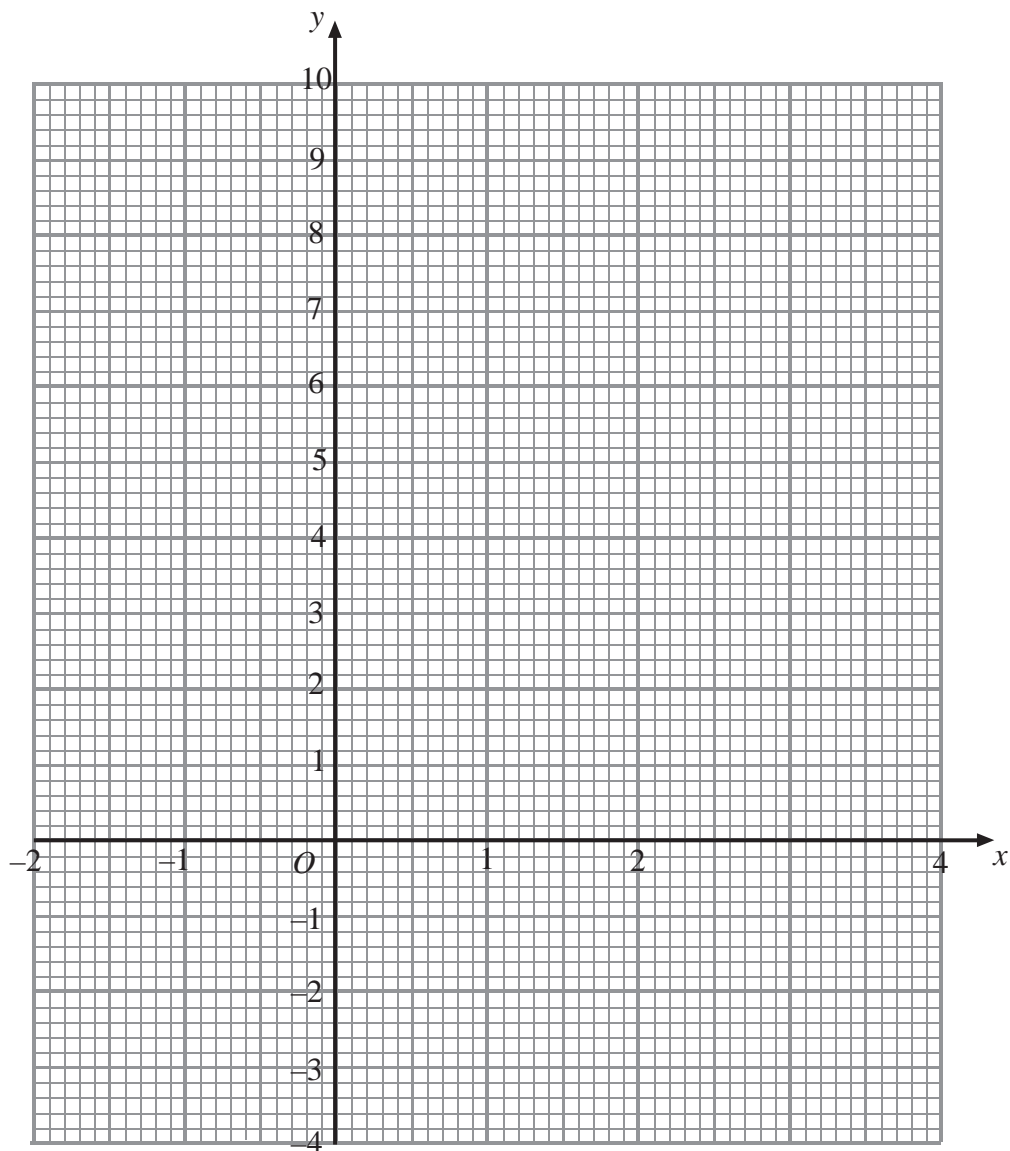


4. (a) Complete the table of values for $y = x^2 - 3x - 1$

x	-2	-1	0				
y		3	1	-3		-1	

(2)

(b) On the grid, draw the graph of $y = x^2 - 3x - 1$ for values of x from -2 to 4



(2)

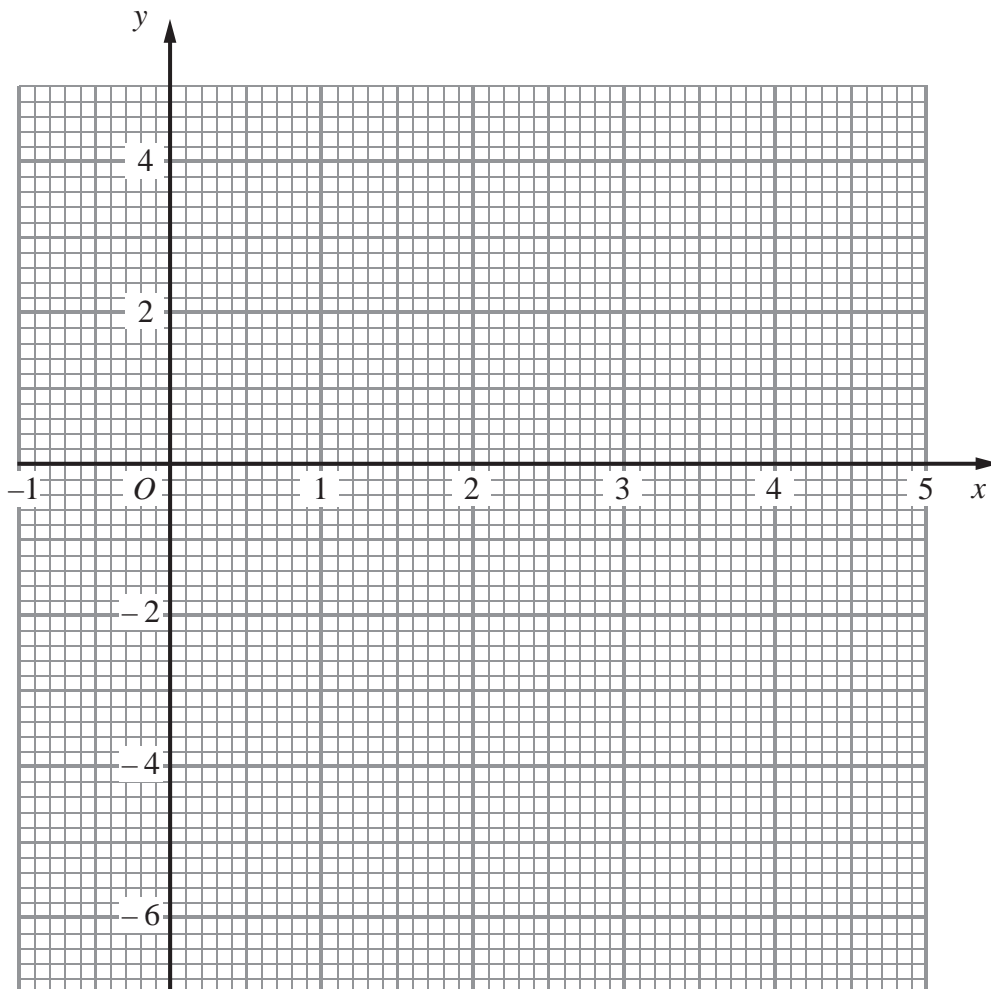


5. (a) Complete the table of values for $y = x^2 - 4x - 1$

x	-1	0	1	2	3	4	5
y		-1	-4			-1	4

(2)

(b) On the grid, draw the graph of $y = x^2 - 4x - 1$



(2)

(c) Use your graph to estimate the values of x when $y = -3$

$x = \dots\dots\dots$

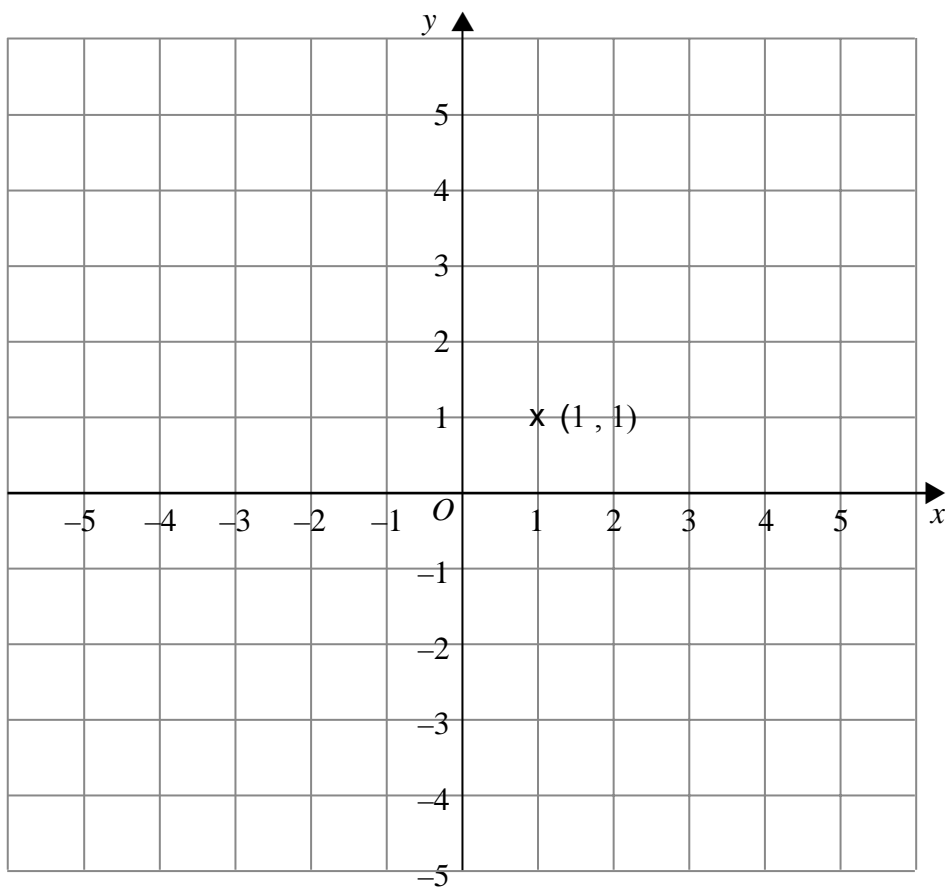
$x = \dots\dots\dots$

(2)

(Total 6 marks)



6. Show that any straight line that passes through the point $(1, 1)$ must intersect the curve with equation $x^2 + y^2 = 16$ at two points.



(Total 3 marks)

