

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 ►



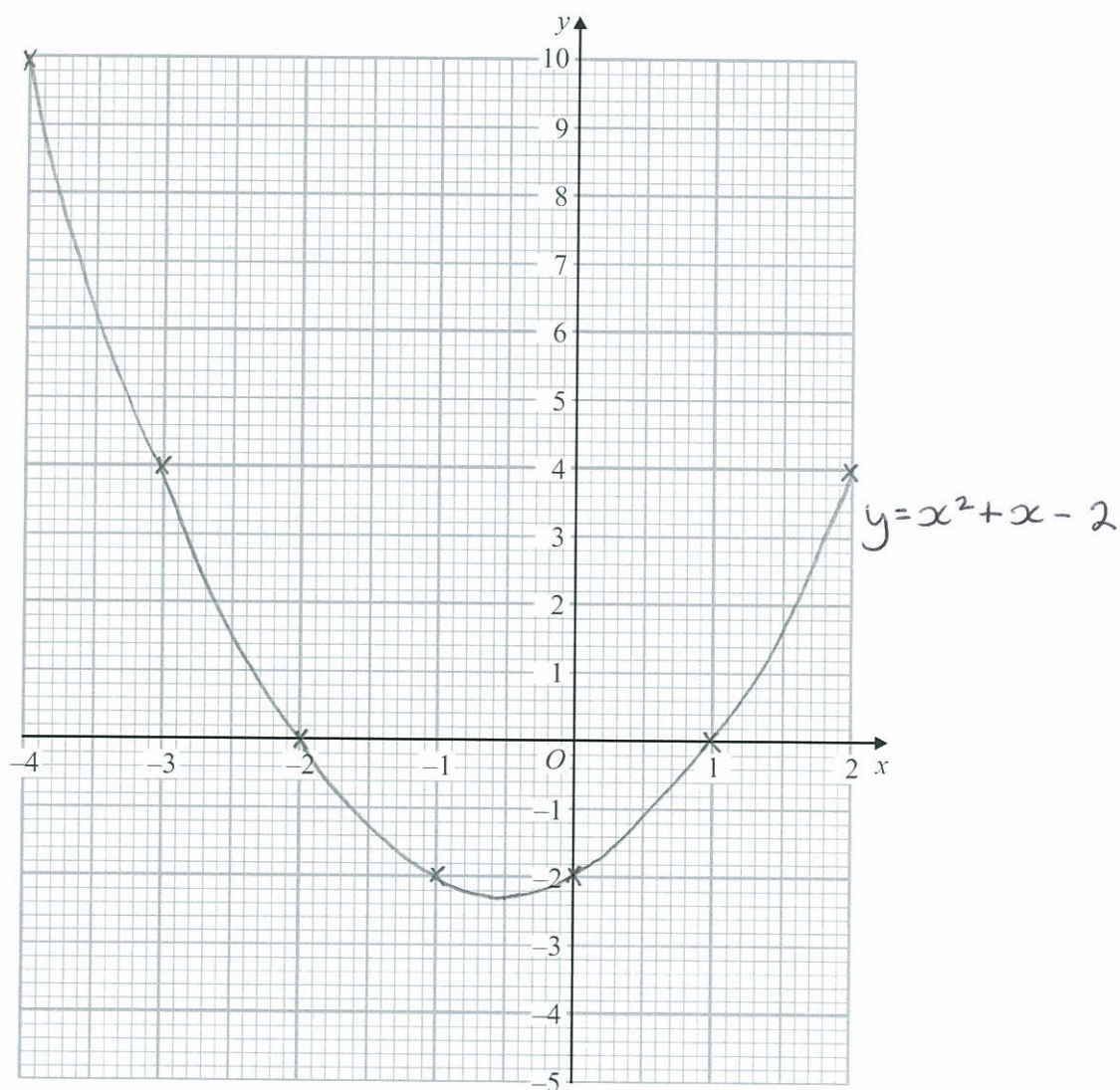
1. (a) Complete the table of values for $y = x^2 + x - 2$

x	-4	-3	-2	-1	0	1	2
y	10	4	0	-2	-2	0	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 $x^2 + x - 2 = 0$

$$x = \underline{-2} \dots\dots\dots$$

$$x = \underline{1} \dots\dots\dots$$

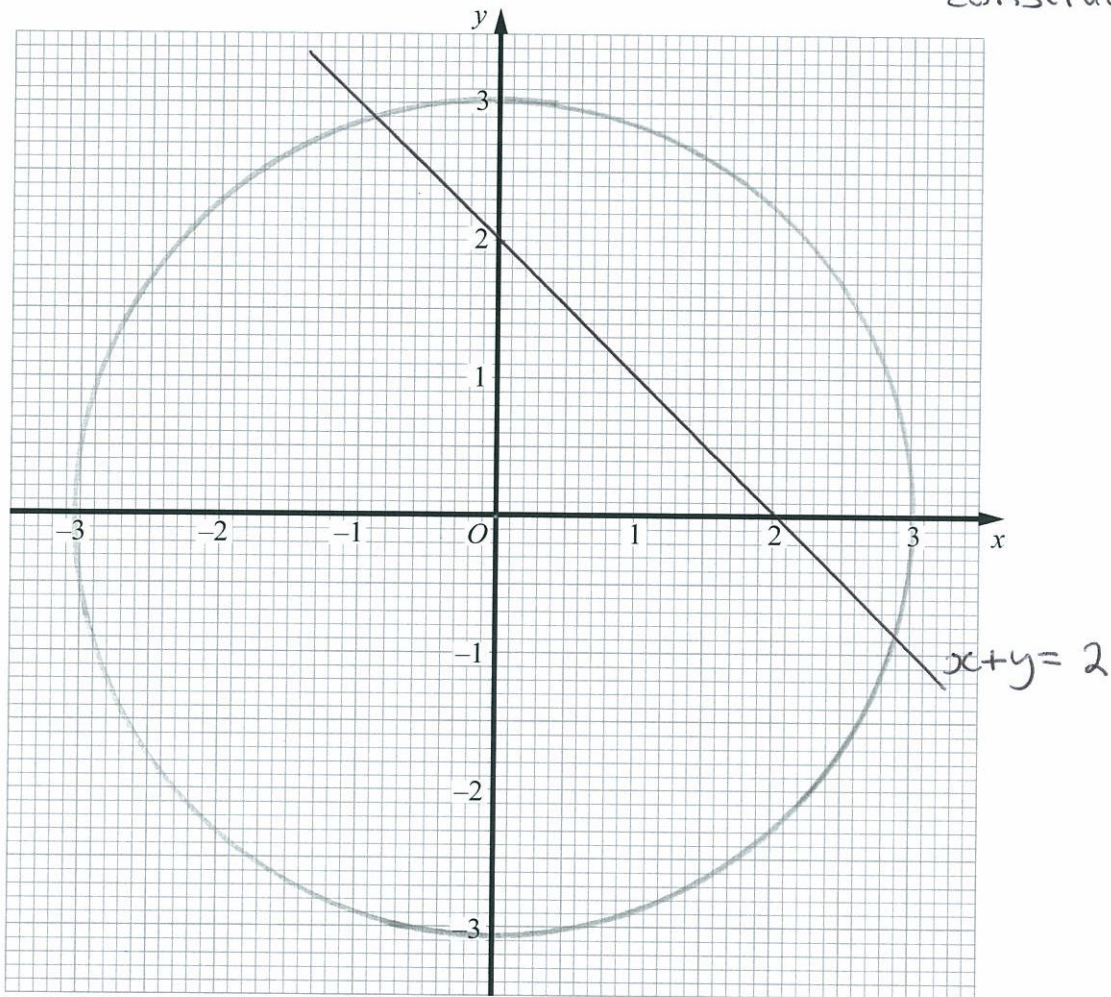
(1)

(Total 5 marks)



N.B.: Equation of a circle centred at $(0,0)$ and with radius r is given by $x^2 + y^2 = r^2 \Rightarrow x^2 + y^2 = 9$ can be re-written $x^2 + y^2 = 3^2$ to give the correct description of the circle to be constructed.

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 $x^2 + y^2 = 9$
 $x + y = 2$

$$x + y = 2$$

$$\Rightarrow y = -x + 2$$

$$x = 2.9, y = -0.9$$

$$\text{or } x = -0.9, y = 2.9$$

(3)

(Total 5 marks)

