Q1.

A point lies on the graph with equation $y = x^2 + x$
The x-coordinate of the point is -3

Circle the coordinates of the point.

$(-3, -12)$ $\qquad$ $(-3, -6)$ $\qquad$ $(-3, 6)$ $\qquad$ $(-3, 12)$

(Total 1 mark)

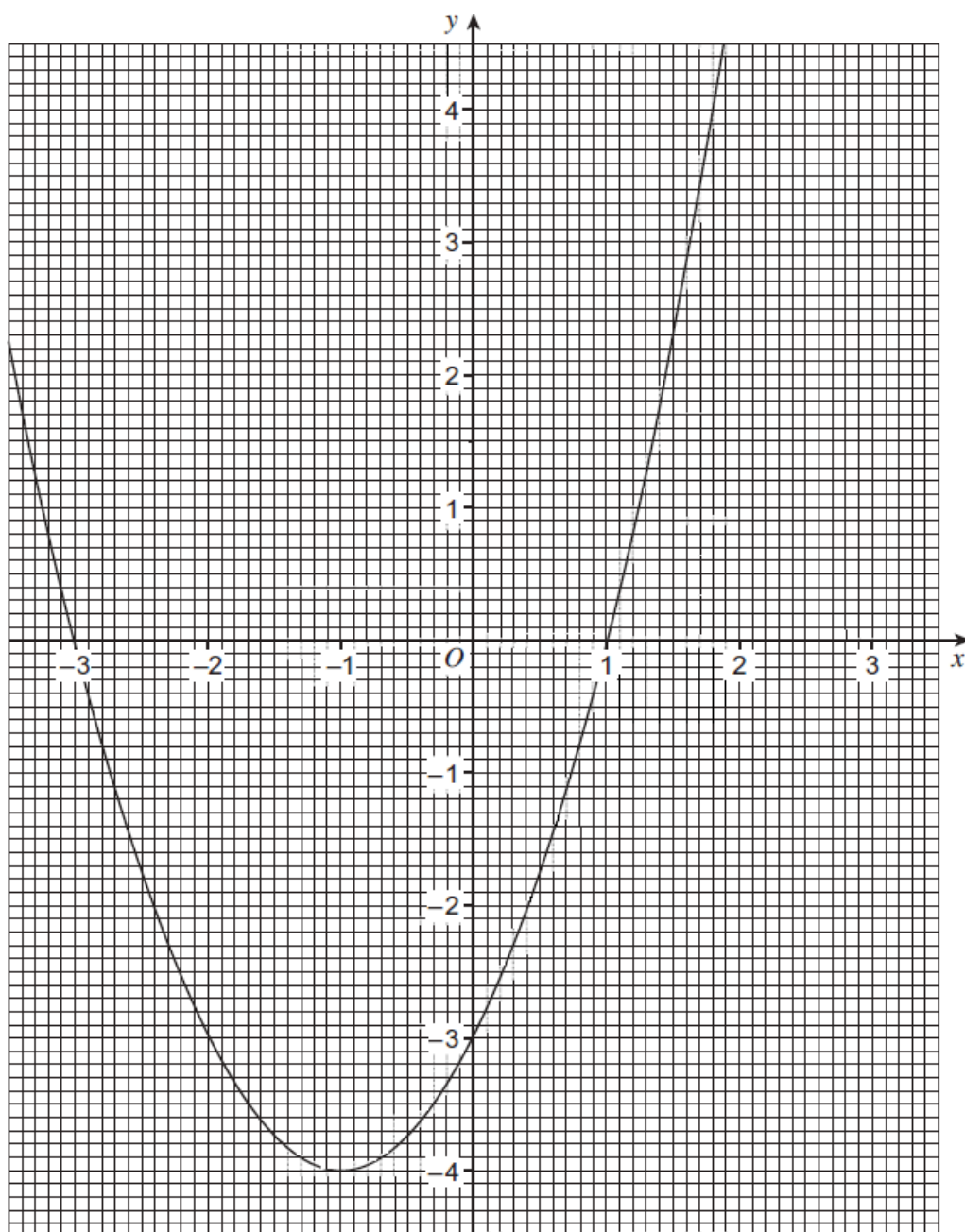AQA GCSE Maths - Quadratic Graphs (F)

Q2.

The graph of $y = x^2 + 2x - 3$ is drawn below.

Draw an appropriate straight line on the graph to work out the approximate solutions of

$$x^2 + x - 3 = 0$$
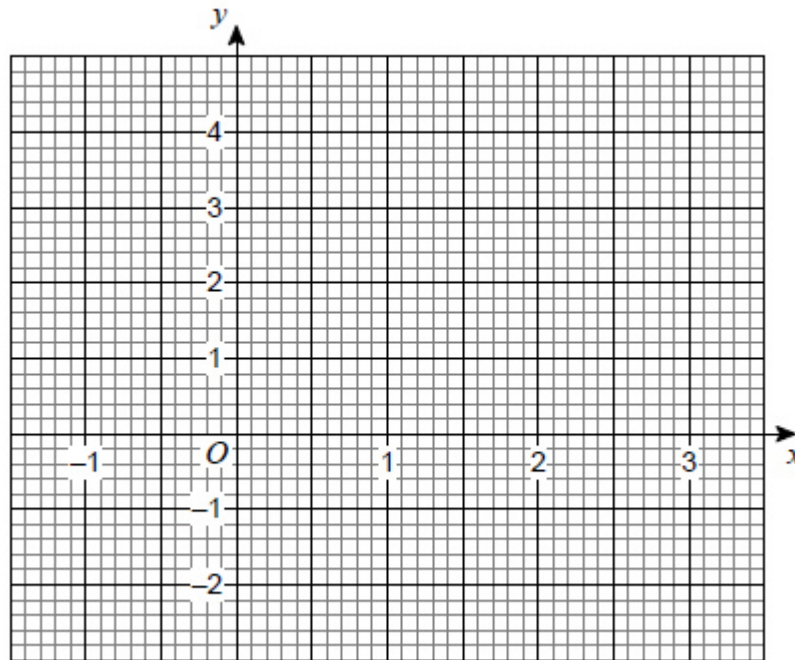
_____

_____

Answer _____

$y = x^2 + 2x - 3$

Q3.

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

x	−1	0	1	2	3
y		0	−1		

(2)

(b)   Draw the graph of $y = x^2 - 2x$ for values of x from −1 to 3

(2)

(c)   Write down the coordinates of the turning point of the graph.

Answer (............................. , ...)

(1)

(Total 5 marks)

Q4.

Circle the two roots of $(2x + 3)(5x - 2) = 0$

$-\dfrac{3}{2}$ $-\dfrac{2}{5}$ $\dfrac{2}{5}$ $\dfrac{3}{2}$

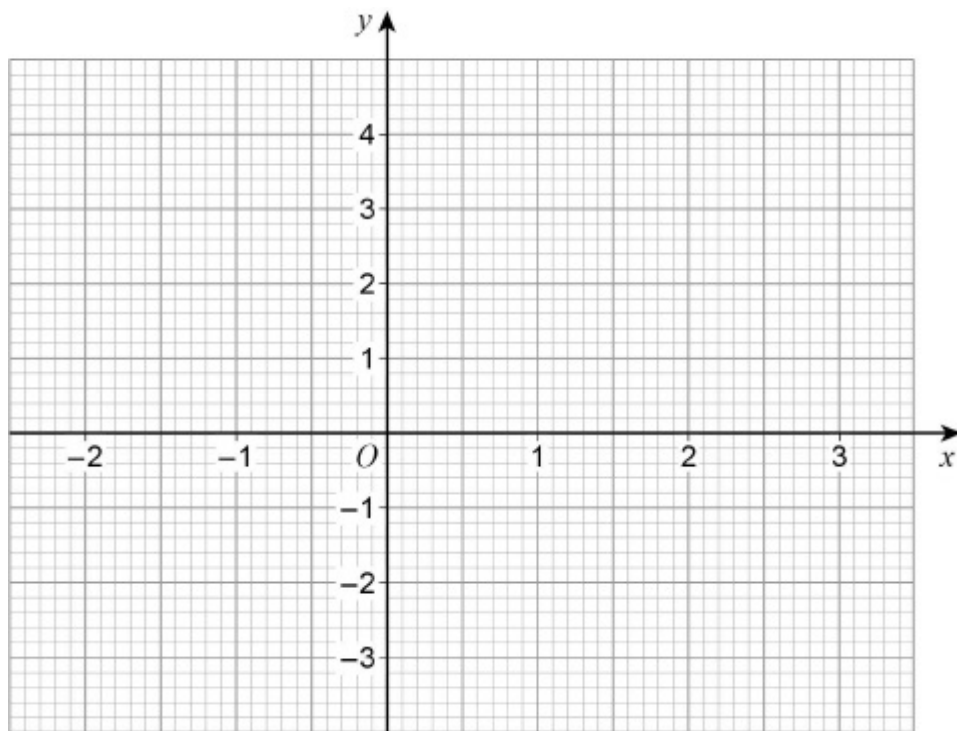(Total 1 mark)

Q5.

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

x	−2	−1	0	1	2	3
y			−2	−2		4

(2)

(b)   Draw the graph of $y = x^2 - x - 2$ for values of x from −2 to 3

(2)

(Total 4 marks)

AQA GCSE Maths - Quadratic Graphs (F)

Q6.

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

x	−2	−1	0	1	2	3
y			−2	−2		4

(2)

(b) Draw the graph of $y = x^2 - x - 2$ for values of x from −2 to 3

(2)

(c) Write down the x coordinate of the turning point of the graph.
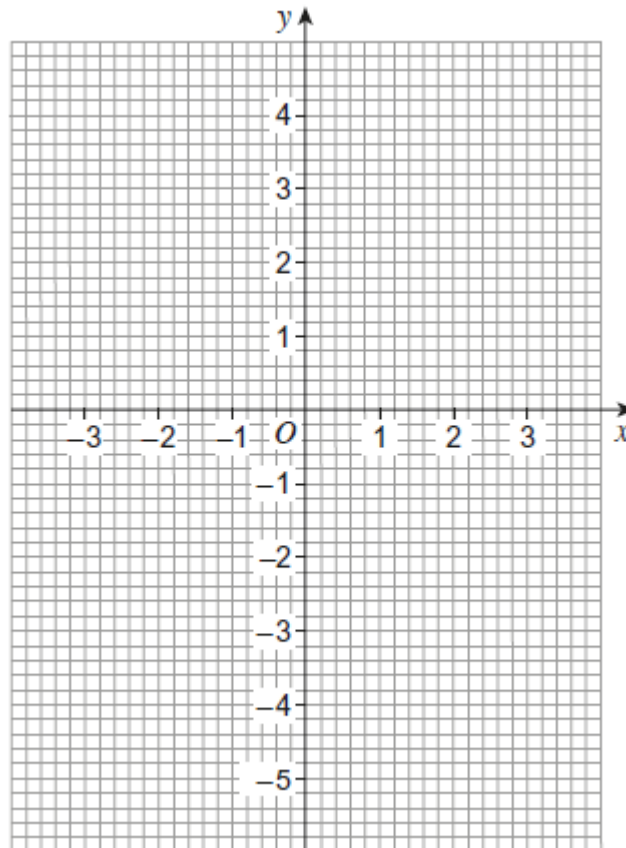
Answer _____

(1)

(Total 5 marks)

AQA GCSE Maths - Quadratic Graphs (F)

Q7.

(a) Complete the table of values for $y = x^2 - 5$ for values of x from -3 to 3

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

(2)

(b) Draw the graph of $y = x^2 - 5$ for values of x from -3 to 3

(2)

(c) Use the graph of $y = x^2 - 5$ to write down the values of x when $y = 0$
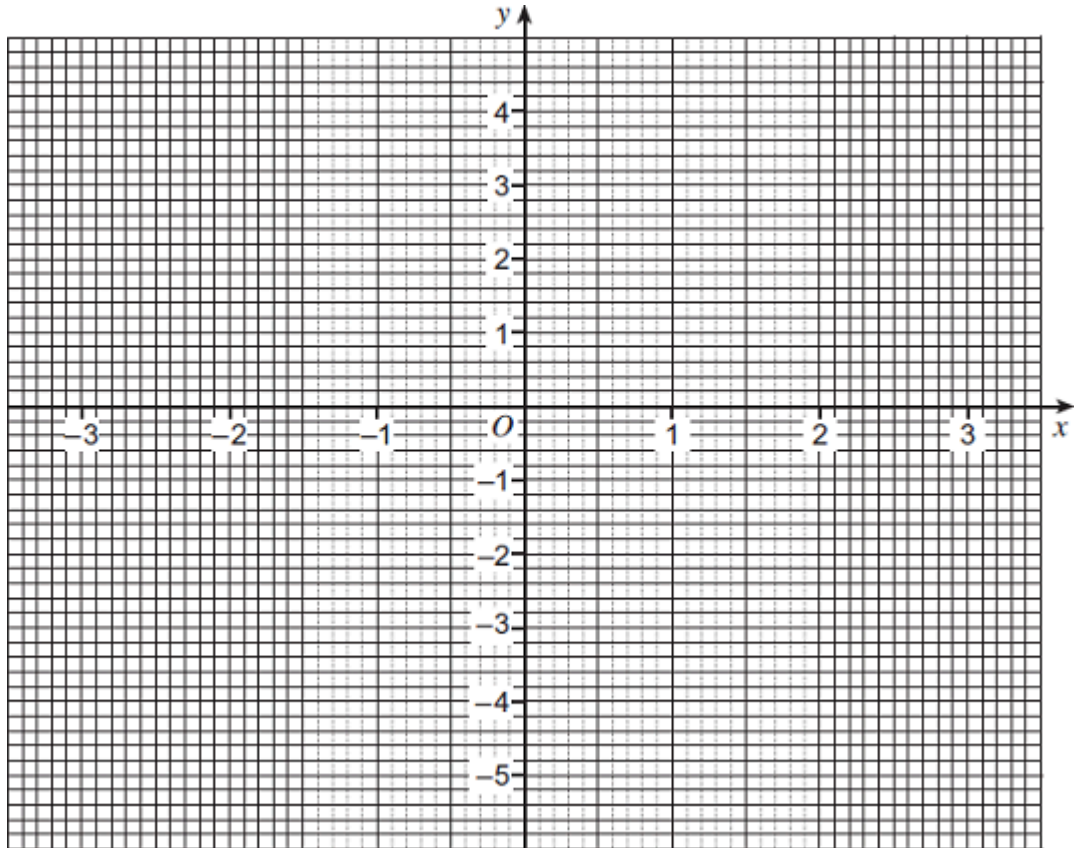
Answer _____ and _____

(1)

(Total 5 marks)

AQA GCSE Maths - Quadratic Graphs (F)

Q8.
(a)   Complete the table of values for $y = x^2 - 5$

x	−3	−2	−1	0	1	2	3
y		−1	−4	−5		−1	4

(2)

(b)   Draw the graph of $y = x^2 - 5$ for values of x from −3 to 3.

(3)

(c)   Write down the values of x when $y = 0$
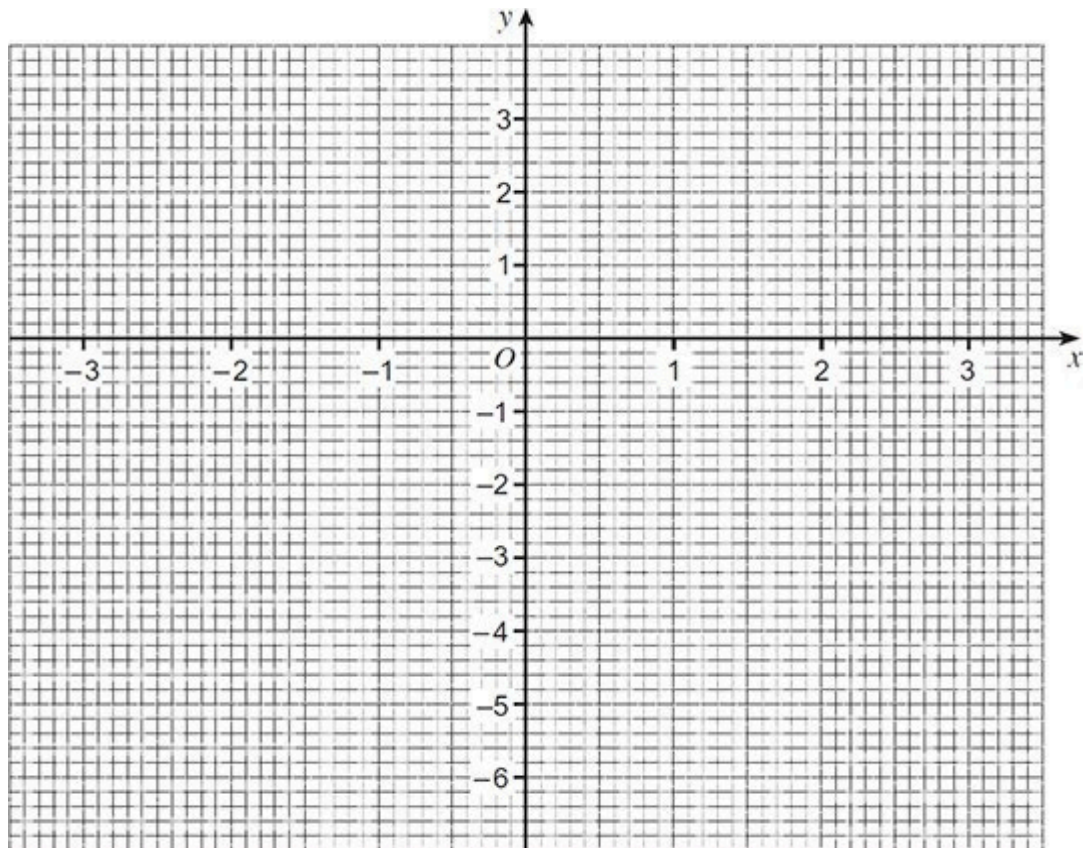
Answer _____ and _____

(2)
(Total 7 marks)

Q9.

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

x	−3	−2	−1	0	1	2	3
y		−1	2		2		−6

(2)

(b) Draw the graph of $y = 3 - x^2$ for values of x from − 3 to 3

(2)

(c) Use the graph to work out the values of x when $y = -1.5$
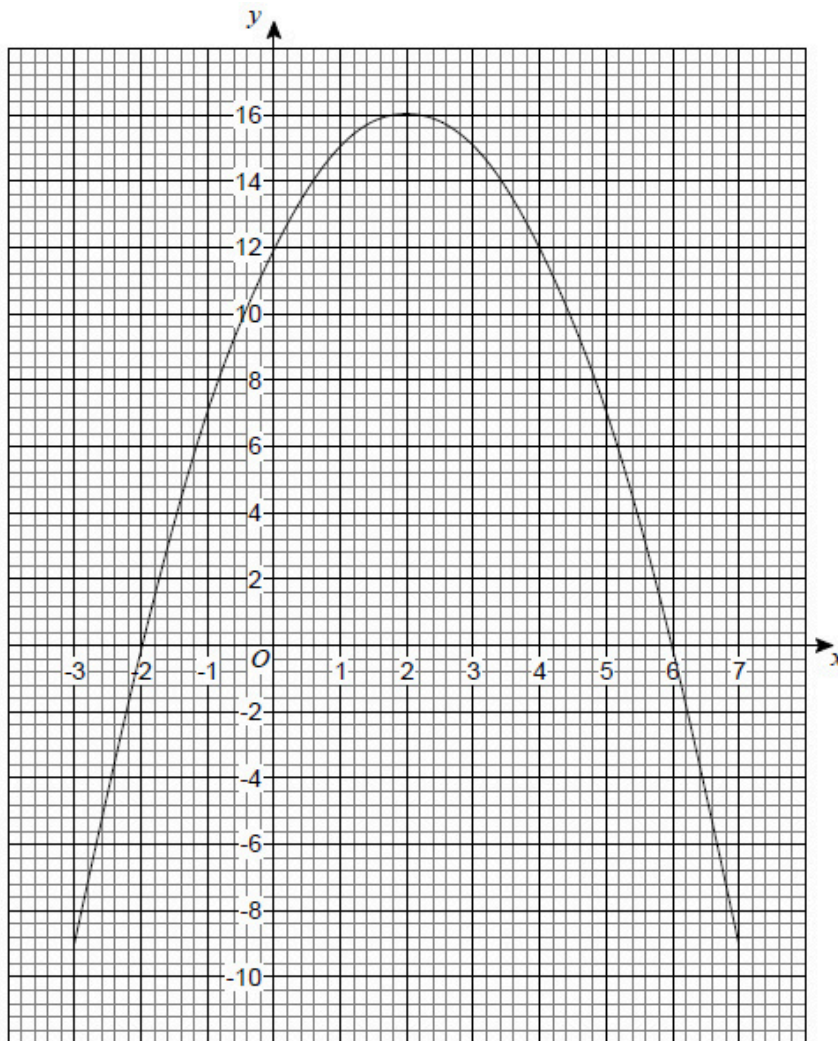
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_____

Answer _____ and _____

(2)

(Total 6 marks)

Q10.
The graph $y = a + bx - x^2$ is shown.

(a)   Circle the coordinates of the turning point of the curve.

        (−2, 0)   (0, 12)   (2, 16)   (6, 0)

(1)

(b)   Circle the value of a.

        −2   12   16   6

(1)

(c)   Circle the two roots of $a + bx - x2 = 0$

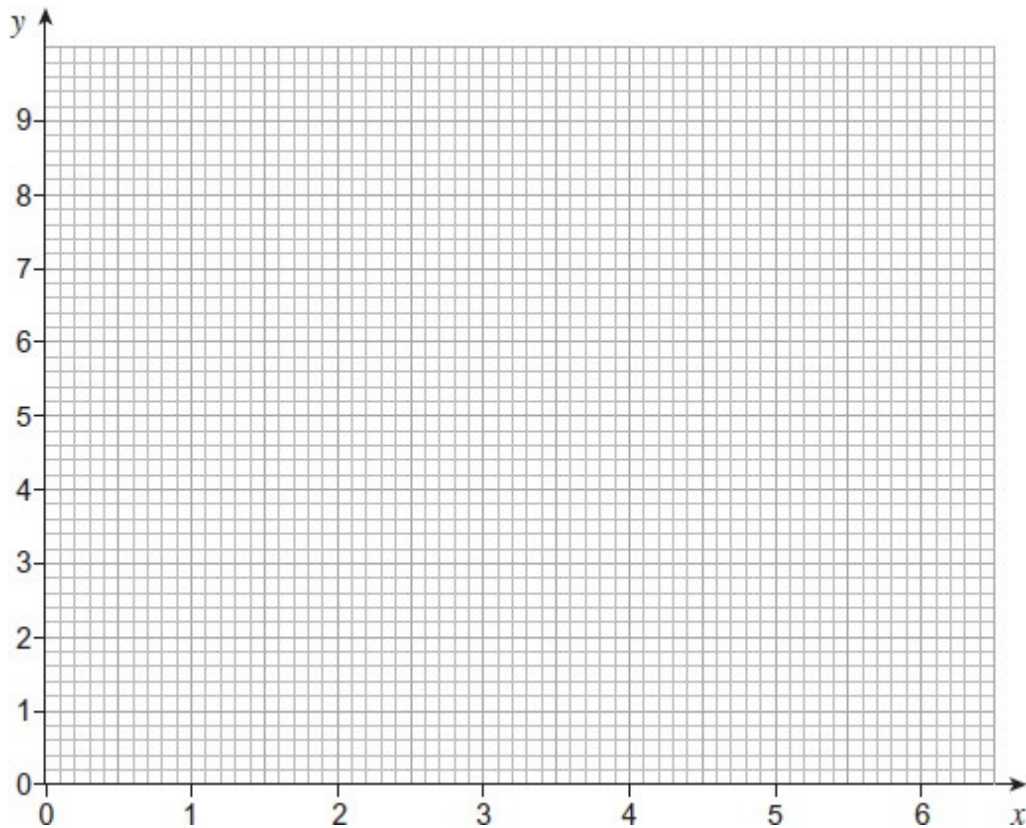   −2 and 6   2 and −6   2 and 6   −2 and −6

(1)
(Total 3 marks)

Q11.
(a)   Complete the table of values for $y = x^2 - 6x + 9$

x	0	1	2	3	4	5	6
y	9	4			1		9

(2)

(b)   Draw the graph of $y = x^2 - 6x + 9$ for values of x from 0 to 6

(2)

(c)   Write down the solution of the equation $x^2 - 6x + 9 = 0$

$x =$ _____

(1)

(Total 5 marks)