Quadratic Graphs

SCAN ME

REVISE THIS TOPIC

CHECK YOUR ANSWERS

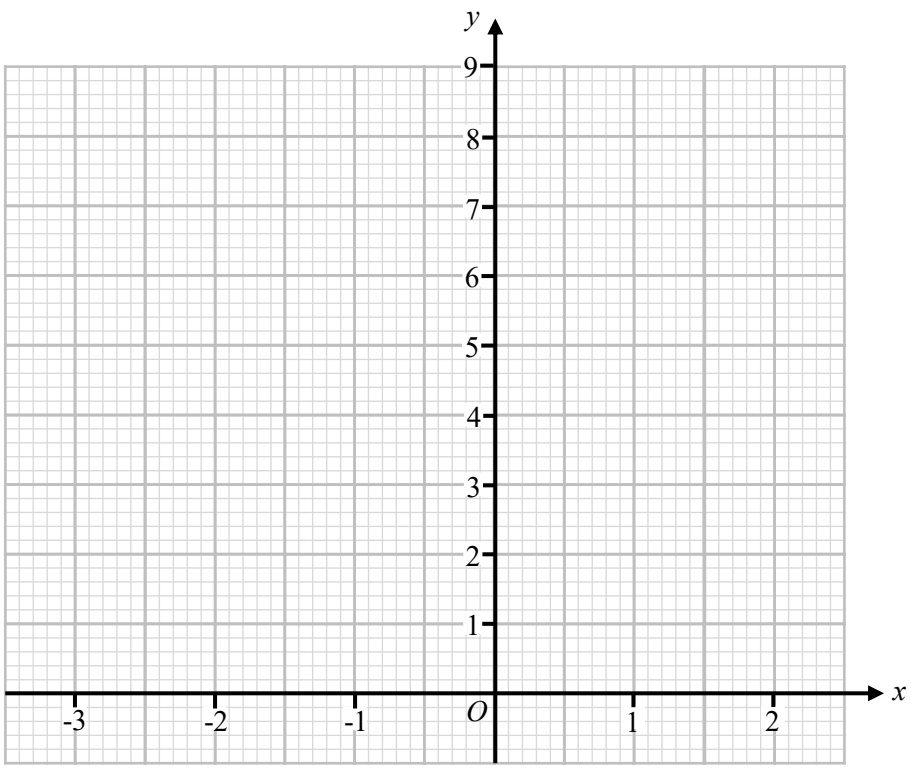
SCAN ME

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

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

(2)

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



(2)

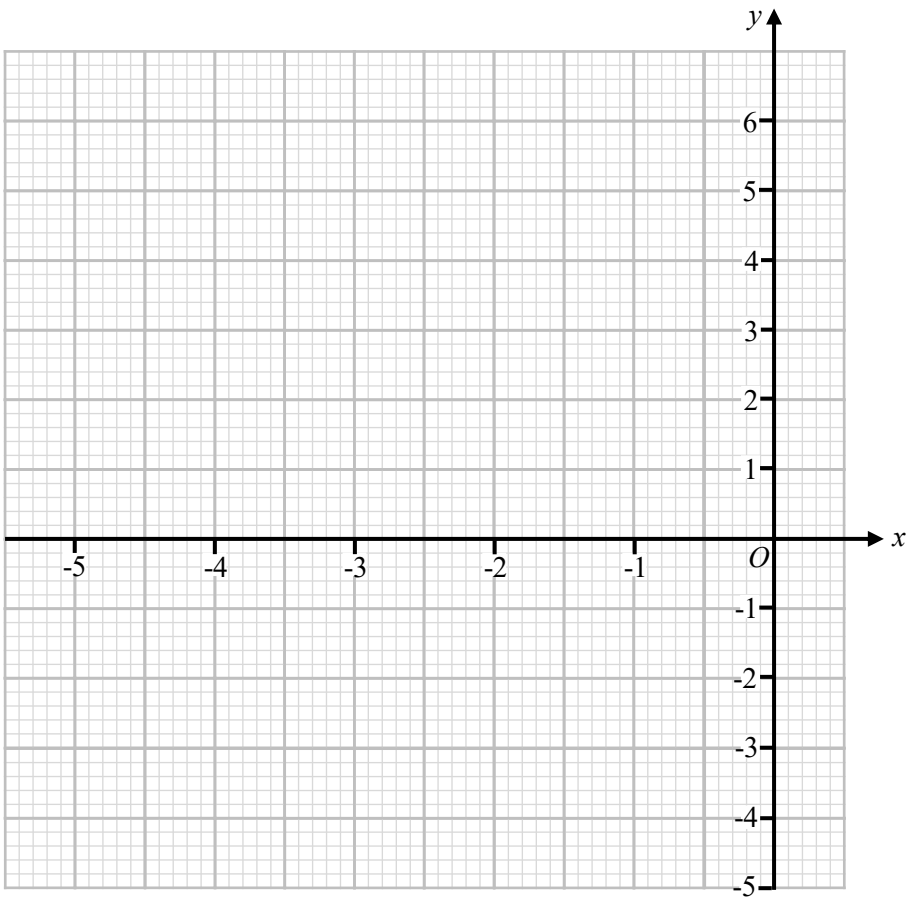
(Total for Question 1 is 4 marks)

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

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

(2)

(b) On the grid, draw the graph of $y = x^2 + 4x$ for values of x from to -5 to 0



(2)

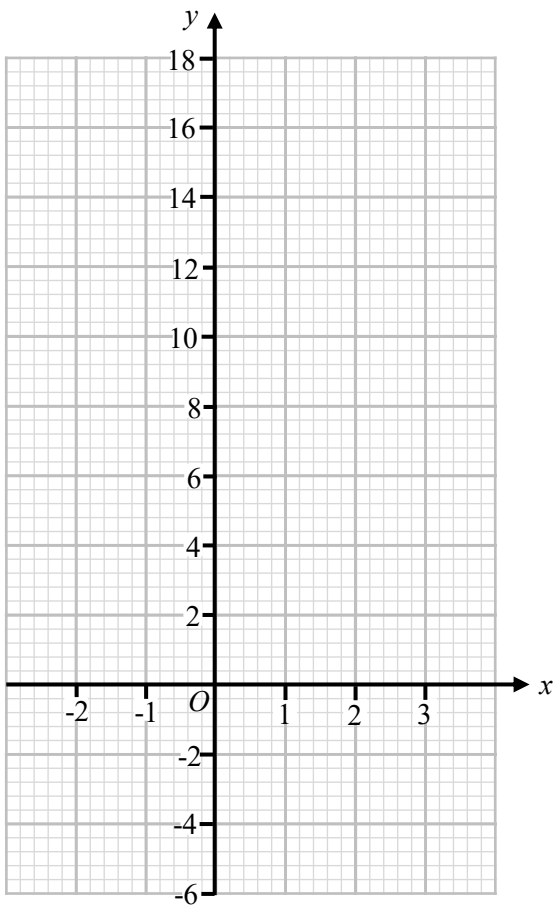
(Total for Question 2 is 4 marks)

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

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

(2)

(b) On the grid, draw the graph of $y = x^2 + 5$ for values of x from to -2 to 3



(2)

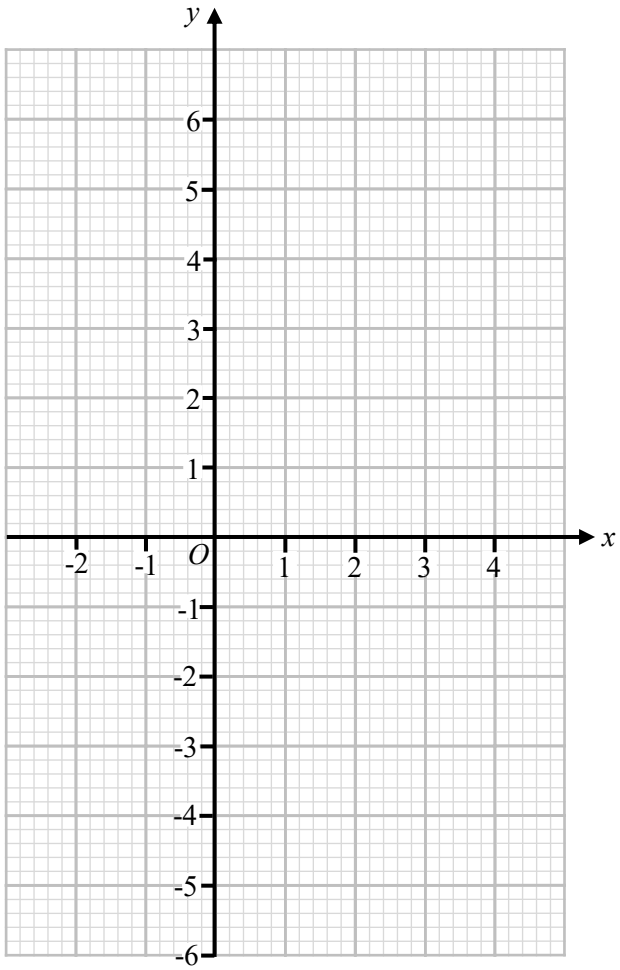
(Total for Question 3 is 4 marks)

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

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

(2)

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



(2)

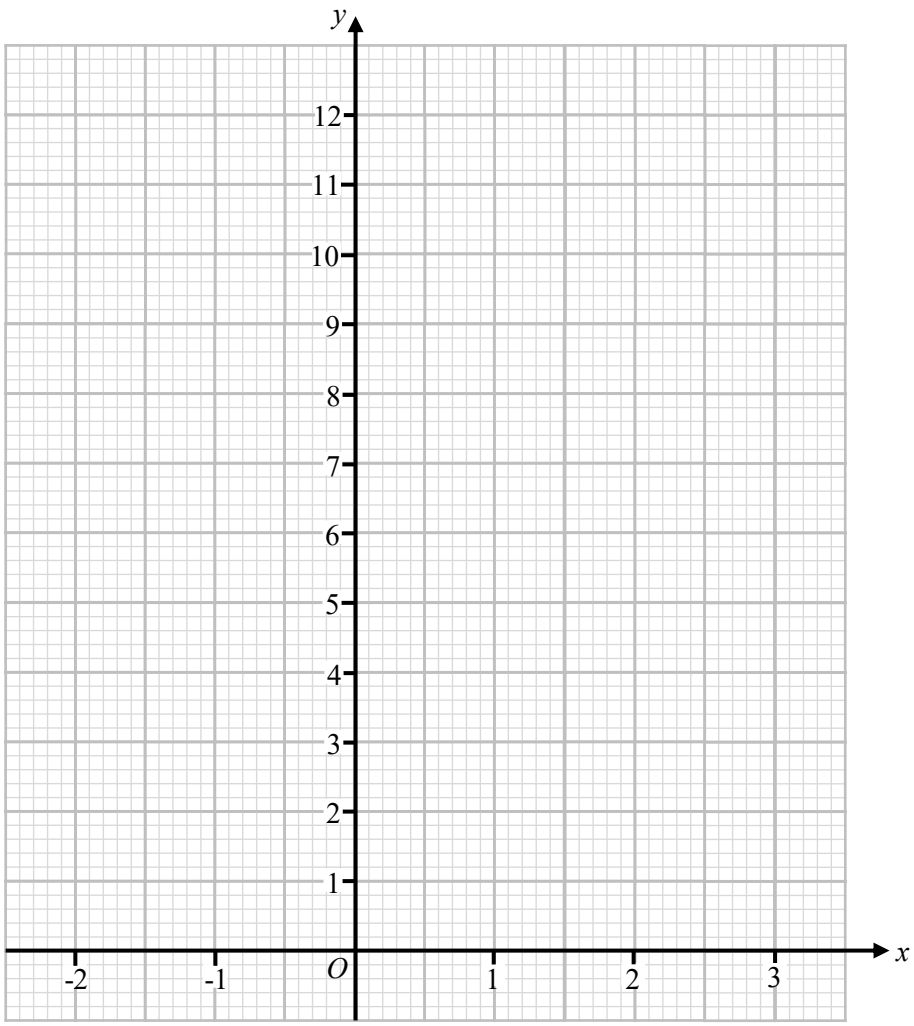
(Total for Question 4 is 4 marks)

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

x	-2	-1	0	1	2	3
y	12			0		2

(2)

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



(2)

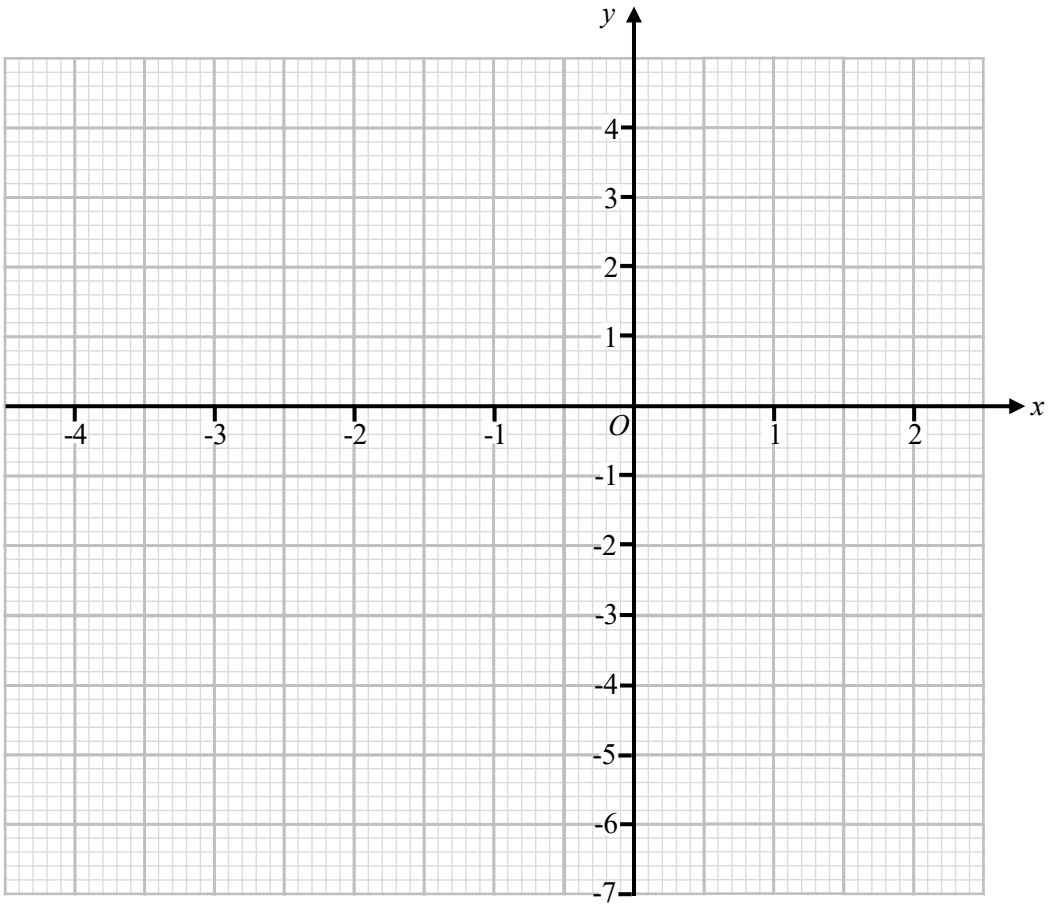
(Total for Question 5 is 4 marks)

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

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

(2)

(b) On the grid, draw the graph of $y = x^2 + 2x - 5$ for values of x from to -4 to 2



(2)

(c) Use your graph to estimate the roots of the equation $x^2 + 2x - 5 = 0$

.....

(2)

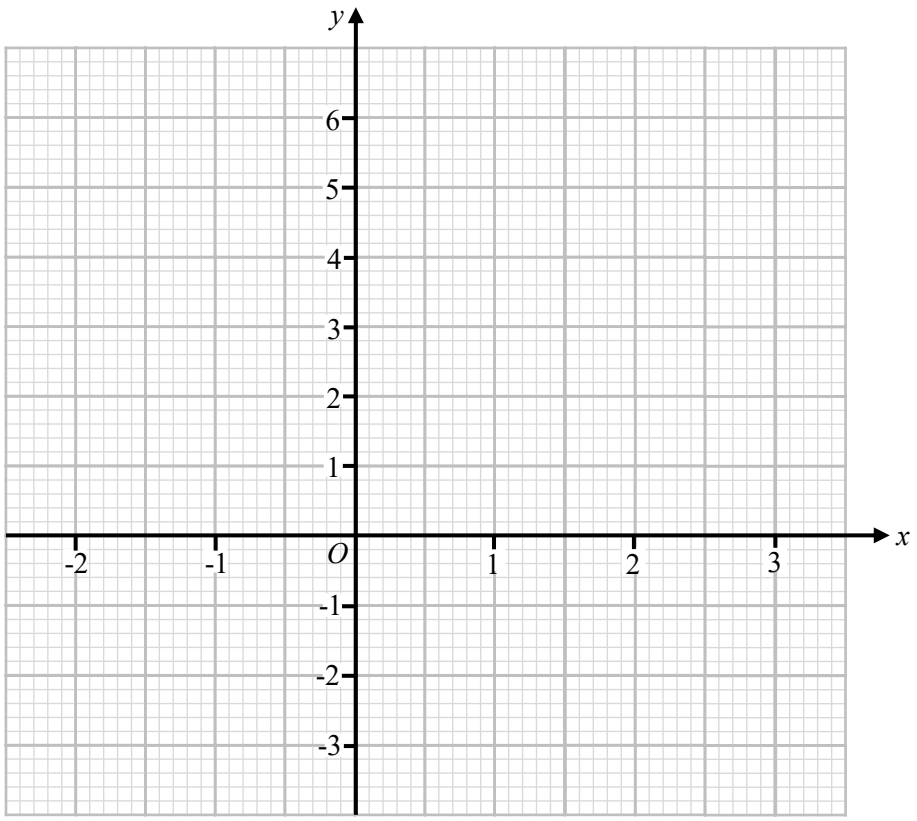
(Total for Question 6 is 6 marks)

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

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

(2)

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



(2)

(c) Use your graph to estimate the roots of the equation $x^2 - x - 1 = 0$

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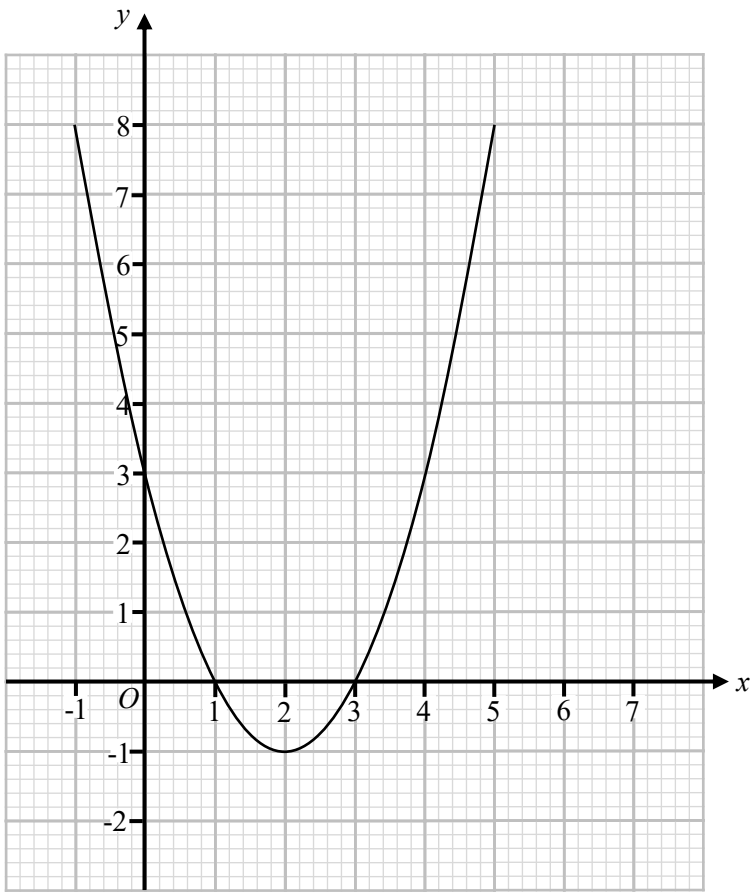
(2)

(Total for Question 7 is 6 marks)

8 Here is the graph of $y = x^2 - 4x + 3$



(a) Use the graph to find the roots of the equation $x^2 - 4x + 3 = 0$

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(2)

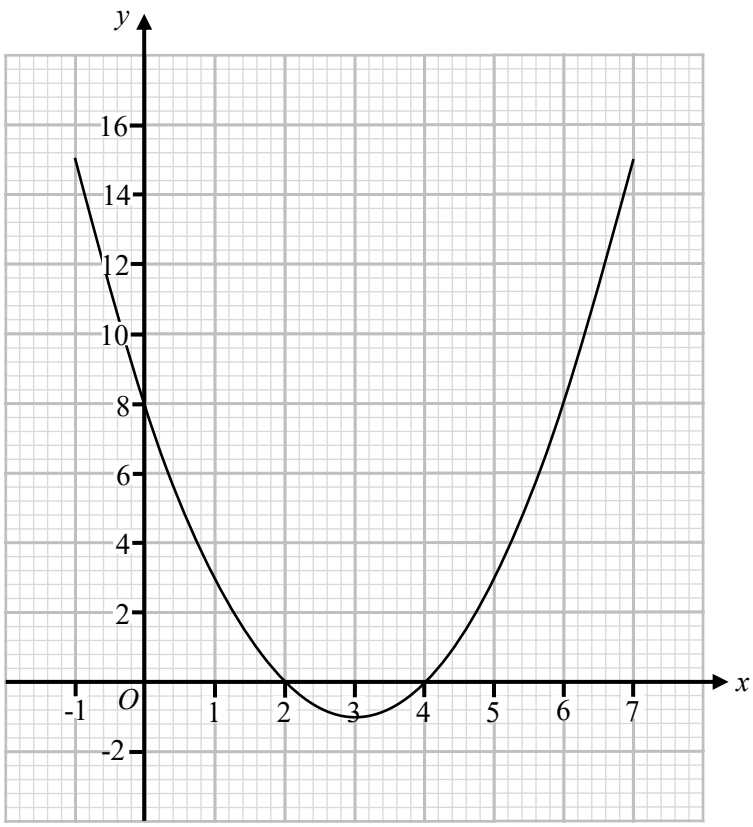
(b) Write down the coordinates of the turning point of the graph $y = x^2 - 4x + 3$

(..... , ...)

(1)

(Total for Question 8 is 3 marks)

9 Here is the graph of $y = x^2 - 6x + 8$



(a) Use the graph to find the roots of the equation $x^2 - 6x + 8 = 0$

.....

(2)

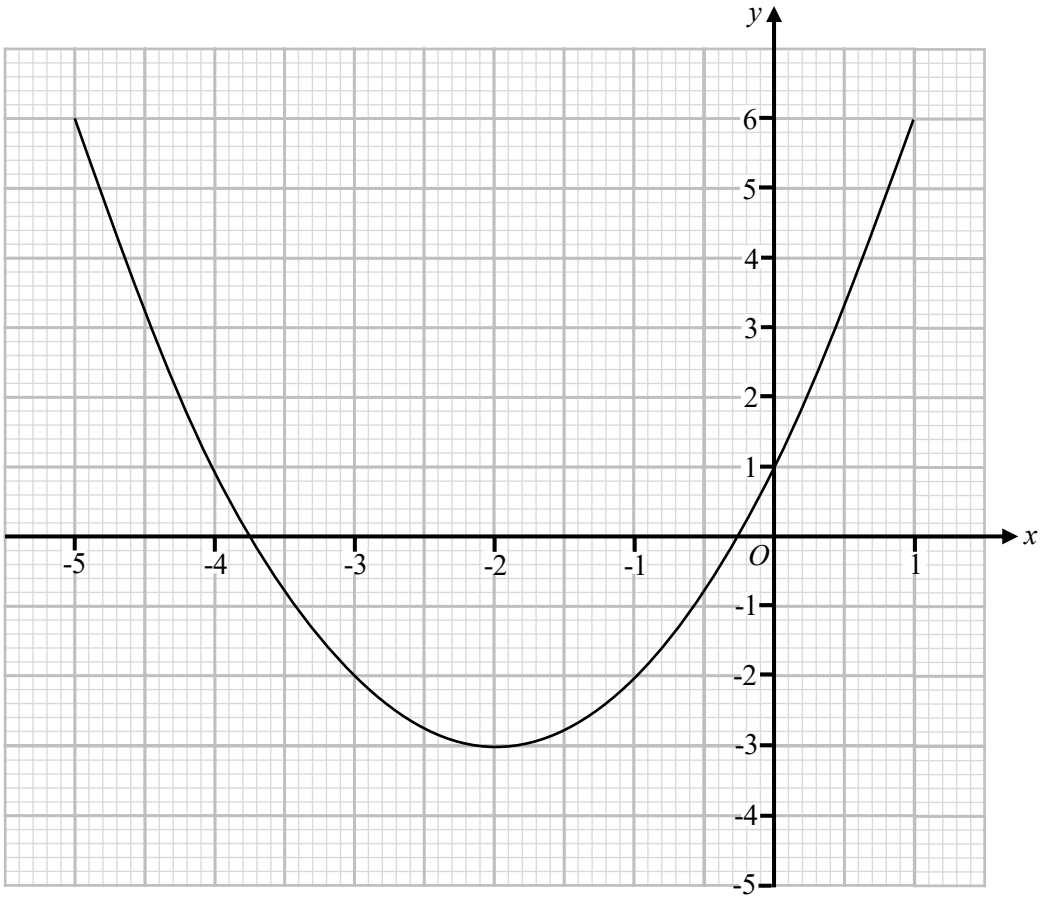
(b) Write down the coordinates of the turning point of the graph $y = x^2 - 6x + 8$

(..... , ...)

(1)

(Total for Question 9 is 3 marks)

10 Here is the graph of $y = x^2 + 4x + 1$



(a) Use the graph to find estimates for the roots of the equation $x^2 + 4x + 1 = 0$

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(2)

(b) Write down the equation of the line of symmetry of the graph $y = x^2 + 4x + 1$

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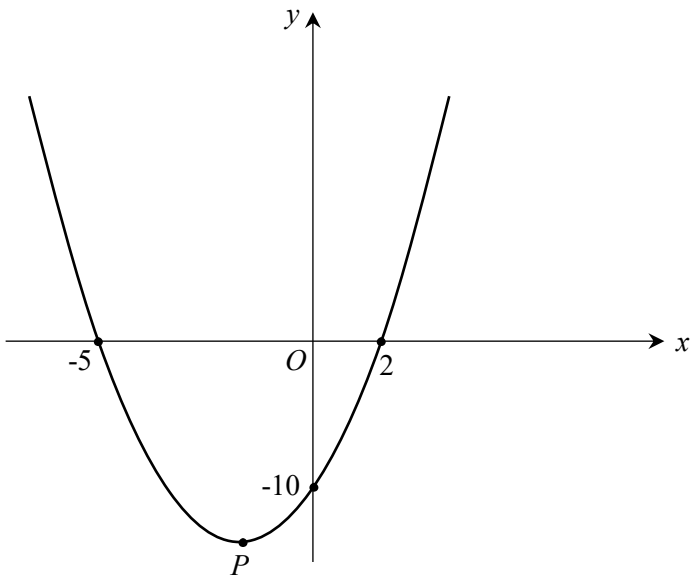
(1)

(Total for Question 10 is 3 marks)

11 Here is a sketch of the graph of $y = x^2 + 3x - 10$



(a) Write down the roots of the equation $x^2 + 3x - 10 = 0$

.....

(1)

(b) Write down the y-intercept of the graph of $y = x^2 + 4x + 1$

.....

(1)

(c) Write down the x-coordinate of P, the turning point of the graph.

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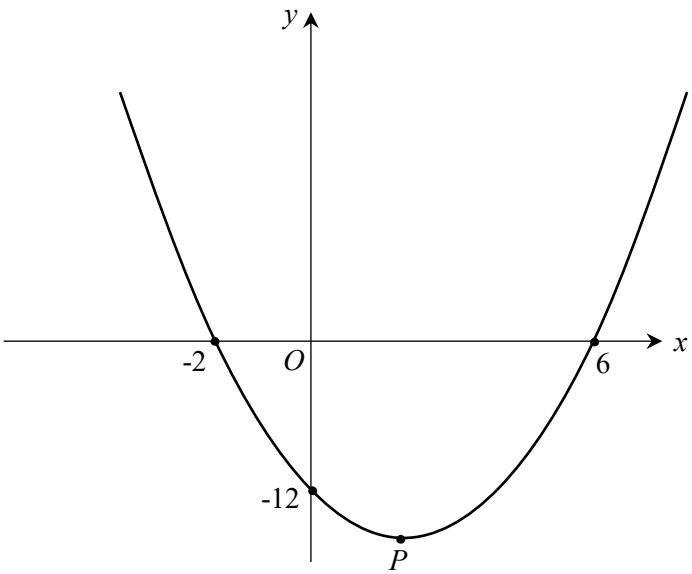
(1)

(Total for Question 11 is 3 marks)

12 Here is a sketch of the graph of $y = x^2 - 4x - 12$



(a) Write down the roots of the equation $x^2 - 4x - 12 = 0$

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(1)

(b) Write down the y-intercept of the graph of $y = x^2 - 4x - 12$

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(1)

(c) Write down the equation of the line of symmetry of the graph.

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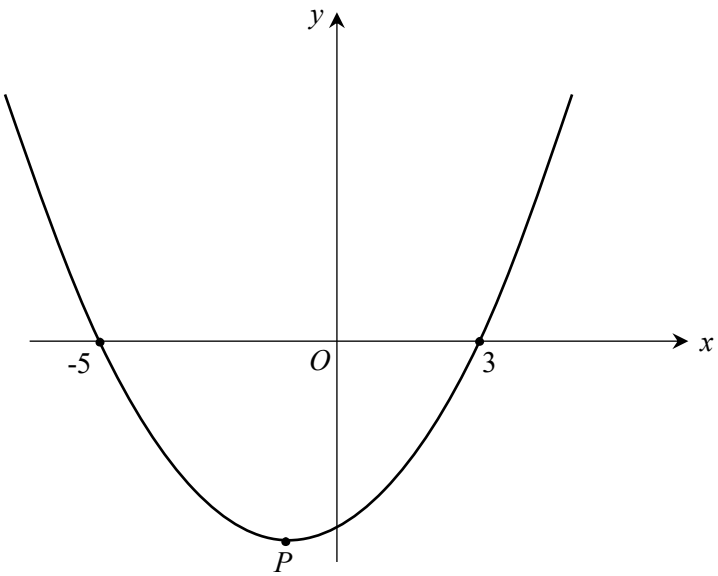
(1)

(Total for Question 12 is 3 marks)

13 Here is a sketch of the graph of $y = x^2 + 2x - 15$



(a) Write down the roots of the equation $x^2 + 2x - 15 = 0$

.....

(1)

(b) Write down the y-intercept of the graph of $y = x^2 + 2x - 15$

.....

(1)

(c) Work out the coordinates of P, the tuning point of the curve.

(..... , ...)

(2)

(Total for Question 13 is 4 marks)