

Quadratic Graphs

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **21**

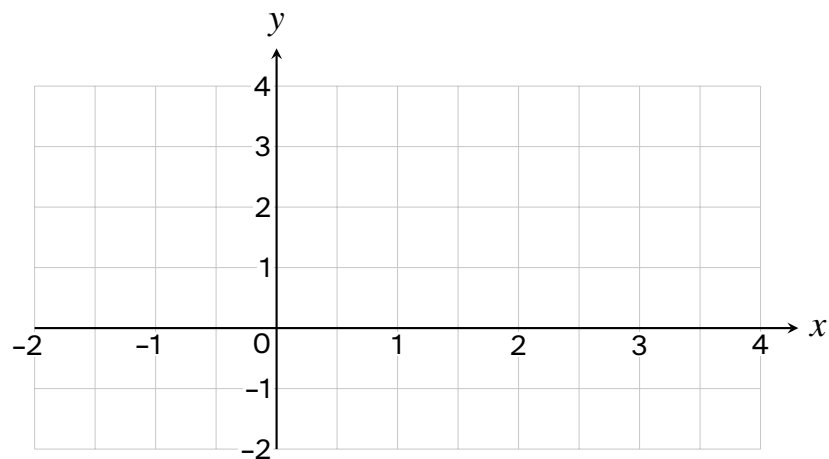
Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

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

x	-1	0	1	2	3
y		0		0	3

[2 marks]

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



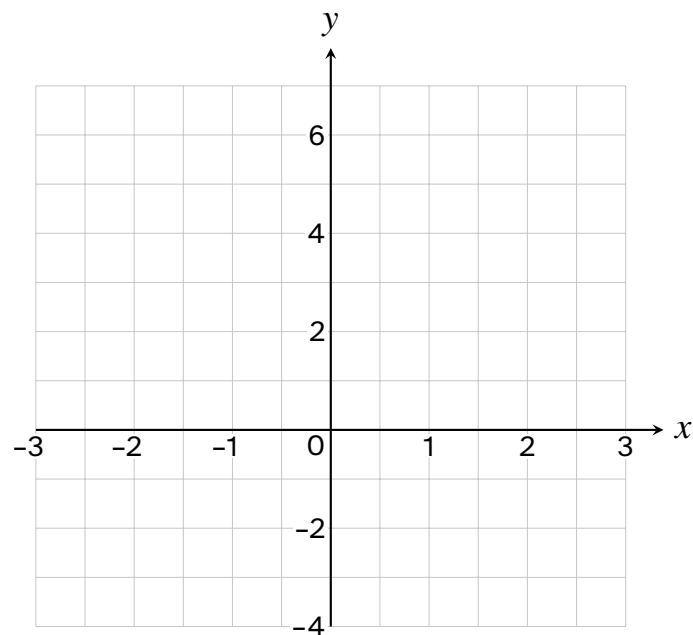
[2 marks]

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

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

[2 marks]

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



[2 marks]

- (c) Write down the coordinates of the turning point of the curve.

[1 mark]

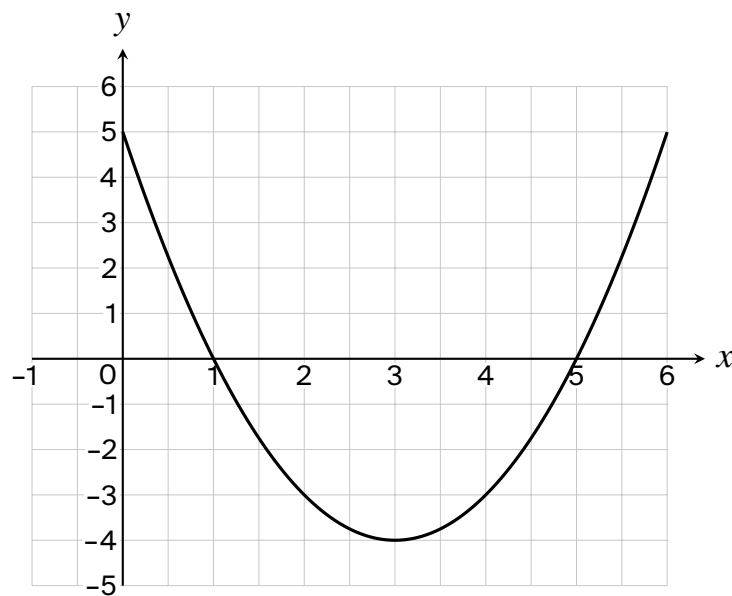
Answer (_____ , _____)

- 3 Priya is completing a table of values for $y = x^2 - 5$
For $x = -3$ she writes $y = -14$

What mistake has Priya made?

[1 mark]

- 4 Here is the graph of $y = x^2 - 6x + 5$ for values of x from 0 to 6



- (a) Use the graph to solve $x^2 - 6x + 5 = 0$

[1 mark]

Answer _____ and _____

- (b) Write down the coordinates of the point where the curve crosses the y -axis.

[1 mark]

Answer (_____ , _____)

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

[1 mark]

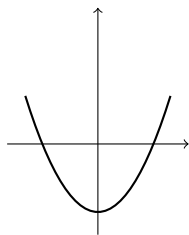
Answer (_____ , _____)

(d) Use the graph to solve $x^2 - 6x + 5 = -3$

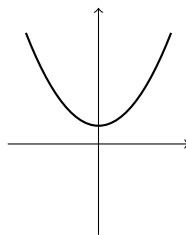
[2 marks]

Answer _____ and _____

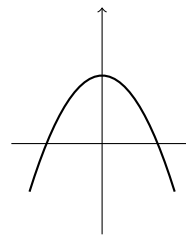
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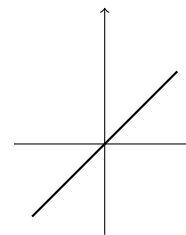
A



B



C



D

Circle the sketch of a graph of the form $y = x^2 + c$ where $c > 0$.

[1 mark]

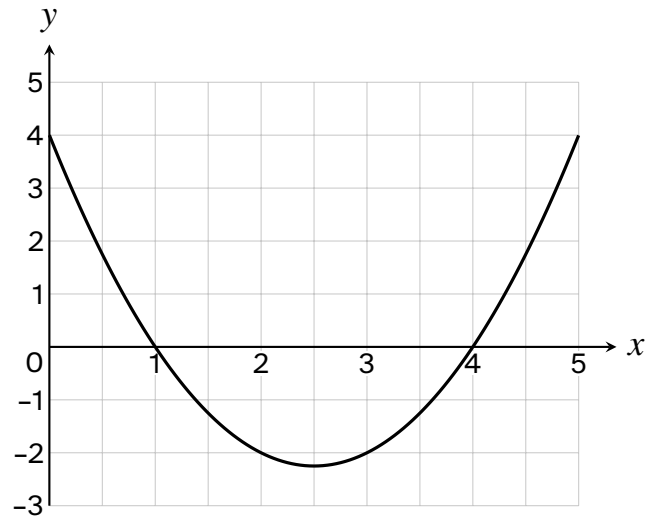
A

B

C

D

- 6 Here is the graph of $y = x^2 - 5x + 4$ for values of x from 0 to 5



- (a) Write down the solutions of $x^2 - 5x + 4 = 0$

[1 mark]

Answer _____ and _____

- (b) Write down the equation of the line of symmetry of the curve.

[1 mark]

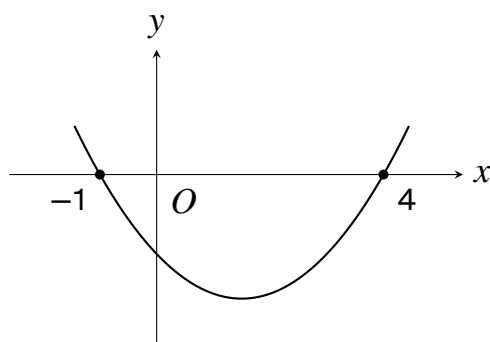
Answer _____

- (c) Work out the minimum value of y .

[1 mark]

Answer _____

- 7 Here is a sketch of a quadratic curve.
It crosses the x -axis at -1 and 4



Not drawn accurately

- (a) Circle the equation of the curve.

[1 mark]

$y = (x - 1)(x + 4)$

$y = (x + 1)(x - 4)$

$y = (x - 1)(x - 4)$

- (b) Write down the coordinates of the point where the curve crosses the y -axis.

[1 mark]

Answer (_____ , _____)