

Q1. (2017)

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

[2 marks]

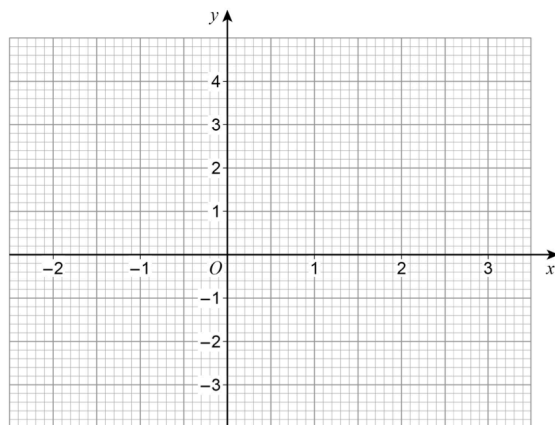
x	-2	-1	0	1	2	3
y			-2	-2		4

Q2. (2017)

(A)

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

[2 marks]



(B)

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

[1 mark]

Answer _____

Q3. (2018)

26 A curve has equation $y = 4x^2 + 5x + 3$ A line has equation $y = x + 2$ Show that the curve and the line have **exactly** one point of intersection.Do **not** use a graphical method.

[4 marks]

Q4. (2019)

1 Circle the point that lies on the curve $y = x^2 - 4x + 1$

[1 mark]

(-1, 4)

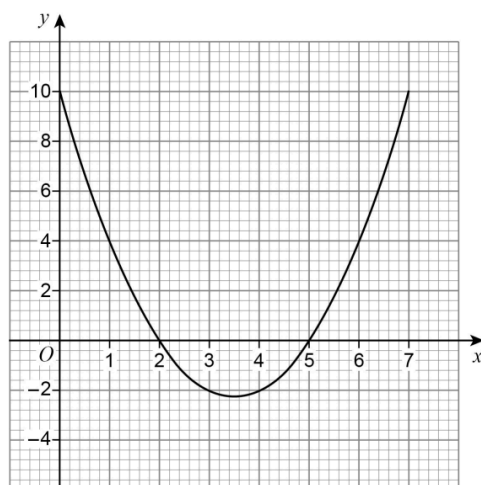
(-1, -4)

(-1, -2)

(-1, 6)

Q5. (2020)

- 7 Here is the graph of $y = x^2 - 7x + 10$ for values of x from 0 to 7



(A)

- 7 (a) Write down the roots of $x^2 - 7x + 10 = 0$

[2 marks]

(B)

- 7 (b) Write down the x -coordinate of the turning point of the curve.

[1 mark]

Q6. (2021)

- 25 The equation of a curve is $y = x^2 + 14x + 52$

By completing the square, work out the coordinates of the turning point.

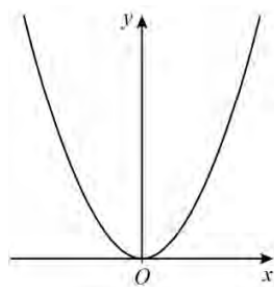
You **must** show your working.

[3 marks]

Answer (_____ , _____)

Q7. (2023)

26 Here is a sketch of $y = x^2$



(A)

26 (a) The minimum point of $y = x^2$ is at $(0, 0)$

Write down the coordinates of the minimum point of $y = x^2 + 2$

[1 mark]

Answer (_____ , _____)

(B)

26 (b) The graph $y = x^2$ is reflected in the x axis.

Write down the equation of the graph after this transformation.

[1 mark]

Answer _____

(C)

26 (c) $y = x^2$ is now transformed to give $y = (x + 3)^2$

Describe fully this single transformation.

[2 marks]

Q8. (2024)

14 A graph passes through the points $(3, 15)$ and $(7, w)$

(A)

14 (a) Assume that the equation of the graph has the form $y = x^2 + c$

Work out the value of w that this would give.

[3 marks]

$w =$ _____

(B)

14 (b) In fact, the graph is a straight line.

What does this mean about the actual value of w ?

Tick **one** box.

[1 mark]

☐

It must be the same as the value in part (a)

☐

It must be different to the value in part (a)

☐

It is impossible to tell