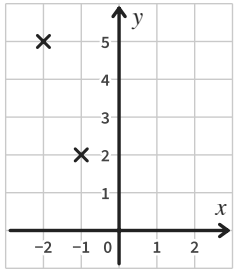
Plotting quadratic graphs

1

Plot the points from the table for $y = x^2 + 1$. Join them with a smooth curve.

x	−2	−1	0	1	2
y	5	2	1	2	5

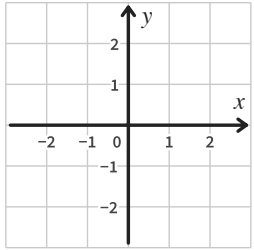


Lowest point _____

2

Complete the table for $y = x^2 - 2$. Draw the graph.

x	−2	−1	0	1	2
y			−2	−1	2

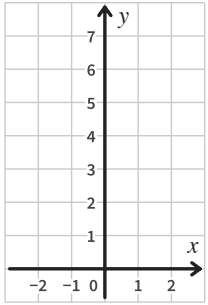


Lowest point _____

3

Complete the table for $y = x^2 + 3$. Draw the graph.

x	−2	−1	0	1	2
y					

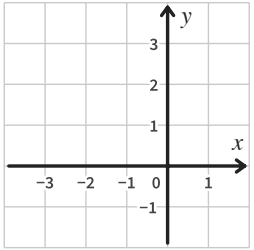


Lowest point _____

4 *Notice the change!*

Complete the table for $y = x^2 + 2x$. Draw the graph.

x	−3	−2	−1	0	1
y					



Lowest point _____

5

Complete the table of values for $y = x^2 - 4x + 1$. Write down the lowest point of the graph.

x	−1	0	1	2	3	4	5
y		1			−2		6

$x = -1$: _____

Lowest point _____

6

Theo works out $y = x^2$ when $x = -4$.
He types [−] [4] [x^2] into his calculator and gets −16. Explain his mistake.
What is the right value of y?

_____

_____

y = _____

7

Three students draw $y = x^2$ through the same points. Which drawing is right? What is wrong with the other two?



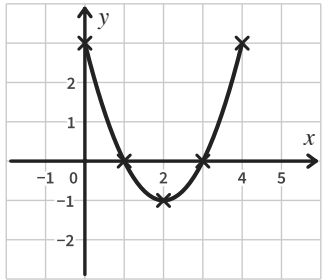
A: _____

C: _____

Right drawing _____

8

This is the graph of $y = x^2 - 4x + 3$. Write down its lowest point and its line of symmetry.



Lowest point _____

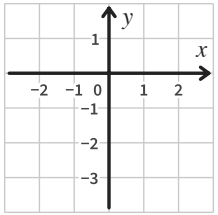
Line of symmetry _____

Plotting quadratic graphs *further practice*

9

Complete the table for $y = x^2 - 3$. Draw the graph. Write down the lowest point.

x	−2	−1	0	1	2
y					

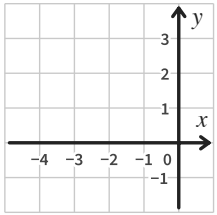


Lowest point _____

10

Complete the table for $y = x^2 + 4x + 3$. Draw the graph. Write down the lowest point.

x	−4	−3	−2	−1	0
y					



Lowest point _____

11

Complete the table for $y = x^2 - 2x - 8$. Write down the lowest point of the graph.

x	−2	−1	0	1	2	3	4
y							

Lowest point _____

12

Nadia made this table for $y = x^2 + x$. One value is wrong. Which one? What should it be?

x	−3	−2	−1	0	1	2
y	6	−6	0	0	2	6

Right value _____

13

This is a table of values for $y = x^2 - 6x + 5$. Write down the lowest point and the equation of the line of symmetry of its graph.

x	1	2	3	4	5
y	0	−3	−4	−3	0

Answer _____

14

Work out the value of $y = x^2 - 8x + 12$ when $x = -3$.

$y =$ _____

15

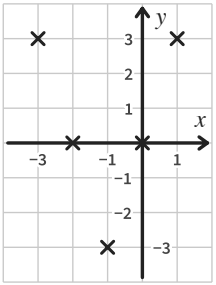
Complete the table for $y = x^2 + 6x + 7$. Write down the lowest point and the line of symmetry.

x	−6	−5	−4	−3	−2	−1	0
y	7	2		−2			7

Answer _____

16

Owen plotted the points for $y = x^2 + 2x$. One point is wrong. Which one? Where should it be?



Right point _____