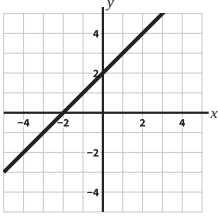


Recognising Linear and Quadratic Graphs

ANSWERS

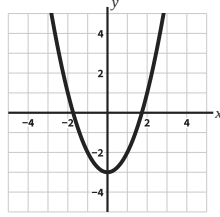
1 x^2 in the equation gives a curve

Which equation matches the graph?



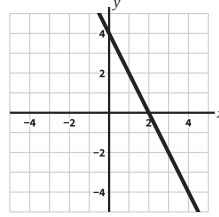
Shape ☒ straight line ☐ curve
Type ☒ linear ☐ quadratic
☒ $y = x + 2$ ☐ $y = x^2 + 2$ ☐ $y = -x + 2$

2 Which equation matches the graph?



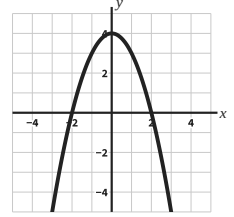
Shape ☐ straight line ☒ curve
Type ☐ linear ☒ quadratic
☐ $y = 2x - 3$ ☐ $y = -x^2 - 3$ ☒ $y = x^2 - 3$

3 Which equation matches the graph?



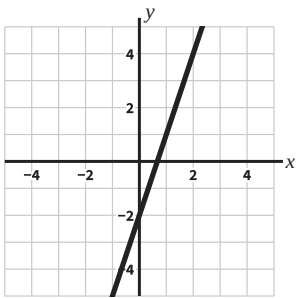
Shape ☒ straight line ☐ curve
Type ☒ linear ☐ quadratic
☐ $y = -x^2 + 4$ ☐ $y = 2x + 4$ ☒ $y = -2x + 4$

4 Which equation matches the graph?



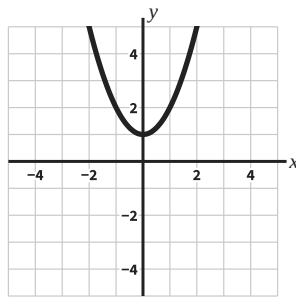
Shape ☐ straight line ☒ curve
Type ☐ linear ☒ quadratic
☐ $y = x^2 + 4$ ☒ $y = -x^2 + 4$ ☐ $y = -2x + 4$

5 Which equation matches the graph?



☒ $y = 3x - 2$ ☐ $y = x^2 - 2$ ☐ $y = -3x - 2$

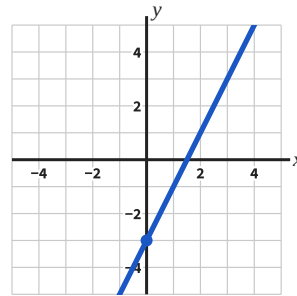
6 Which equation matches the graph?



☐ $y = 2x + 1$ ☐ $y = -x^2 + 1$ ☒ $y = x^2 + 1$

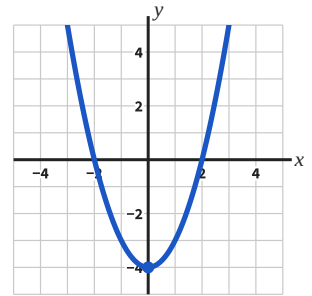
7 Notice the change!

Sketch the graph of $y = 2x - 3$



It crosses the y-axis at (0,)

8 Sketch the graph of $y = x^2 - 4$

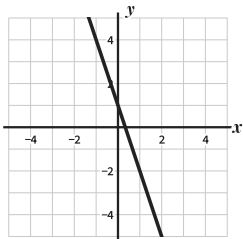


It crosses the y-axis at (0,)

Recognising Linear and Quadratic Graphs further practice

ANSWERS

9 Which equation matches the graph?

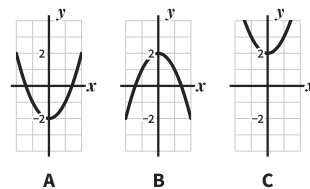


☐ $y = 3x + 1$ ☐ $y = -x^2 + 1$ ☒ $y = -3x + 1$

10 Write linear or quadratic for each equation.

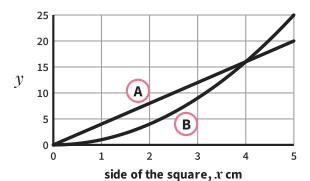
$y = 3x - 1$ linear
 $y = x^2 + 5$ quadratic
 $y = 4 - x$ linear
 $y = 6 - x^2$ quadratic

11 Match each equation to its graph.



$y = x^2 + 2$ graph C
 $y = -x^2 + 2$ graph B
 $y = x^2 - 2$ graph A

12 One graph shows the area $y \text{ cm}^2$ of a square with sides of $x \text{ cm}$. The other shows its perimeter $y \text{ cm}$. Which graph shows the area? Explain.



area $y = x^2$, a curve
Answer Graph B

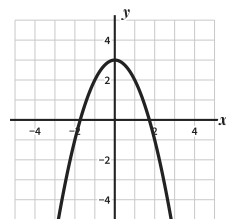
13 Here is a table of values. Which equation does it match?

x	-2	-1	0	1	2
y	7	4	3	4	7

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

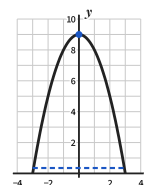
when $x = 2, y = 4 + 3 = 7$
Answer $y = x^2 + 3$

14 Write down the equation of this graph.



upside down, crosses at (0, 3)
Answer $y = -x^2 + 3$

15 An arch has the shape of the graph of $y = -x^2 + 9$ for the part above the x axis. Lengths are in metres.



Height 9 m
Width at the bottom 6 m

16 A ball rolls down a slope. The table shows how far it has rolled. Jo says the graph of distance against time will be a straight line. Is Jo right? Explain.

time (s)	0	1	2	3
distance (m)	0	1	4	9

it goes up 1, then 3, then 5: not the same each time
Answer No, it is a curve