

GCSE Mathematics

F/H

Quadratic Graphs Practice

Foundation/Higher, Grade 5-7

Total Marks	Time	Questions
44	44 min	20

Instructions:

- Do not use a calculator when you see: 
- Answer all questions in the spaces provided.
- Show all your working - marks are awarded for method as well as final answers.
- Cross through any work you do not want to be marked.
- Check your answers if you have time at the end.

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Edexcel-style questions

Q1

Grade 5

Edexcel style

For $y = x^2 + 2$, work out the value of y when $x = -2$, $x = 0$ and $x = 3$.

Answer _____

teachably

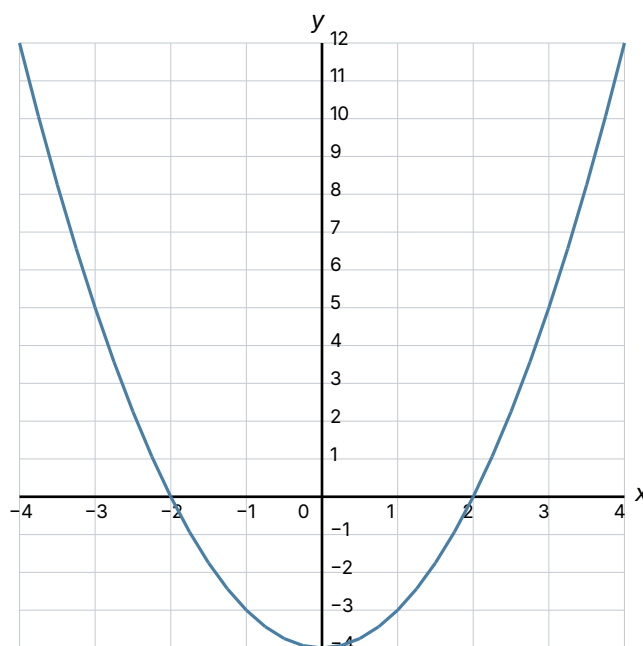
[3 marks]

Q2

Grade 5

Edexcel style

The graph shows $y = x^2 - 4$. Use the graph to find the value of y when $x = 3$, and the value of y when $x = -1$.



Answer _____

teachably

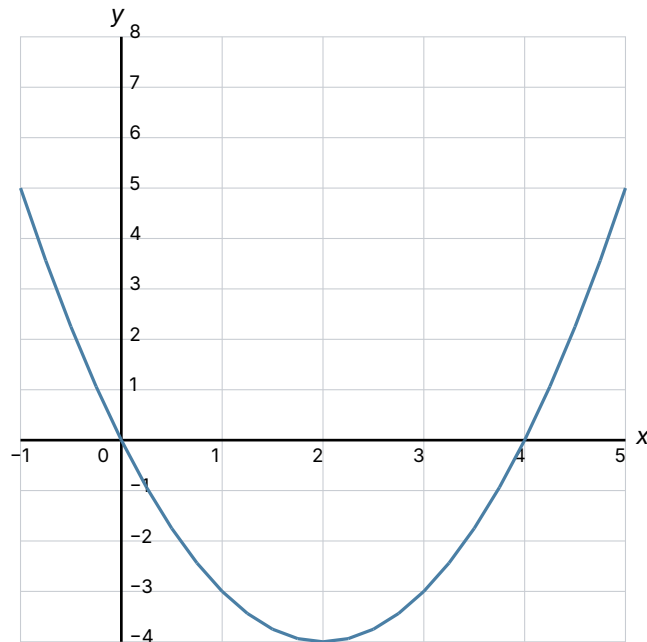
[2 marks]

Q3

Grade 5

Edexcel style

The graph shows $y = x^2 - 4x$. Write down (a) the roots of the equation, and (b) the coordinates of the turning point.



Answer _____

teachably

[2 marks]

Q4

Grade 6

Edexcel style

By factorising, find the roots of $y = x^2 - 5x + 6$.

Answer _____

teachably

[2 marks]

Q5

Grade 7

Edexcel style

By completing the square, find the turning point of $y = x^2 - 6x + 5$.

Answer

teachably

[2 marks]

AQA-style questions

Q6

Grade 5

AQA style

For $y = x^2 - 3x$, work out the value of y when $x = -1$, $x = 2$ and $x = 4$.

Answer _____

teachably

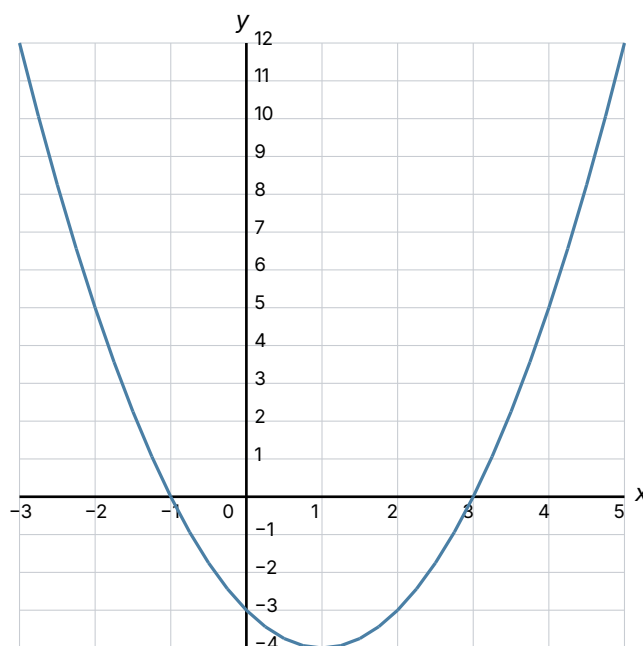
[3 marks]

Q7

Grade 5

AQA style

The graph shows $y = x^2 - 2x - 3$. Use the graph to find the value of y when $x = 4$, and the value of y when $x = 0$.



Answer _____

teachably

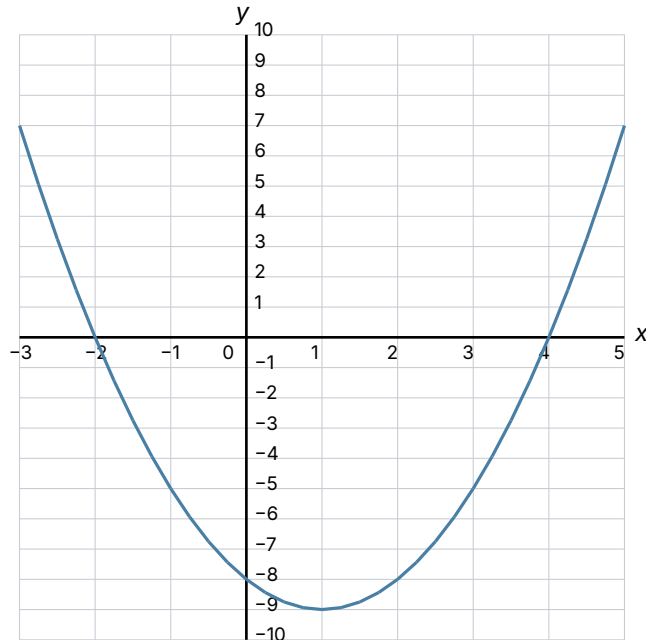
[2 marks]

Q8

Grade 5

AQA style

The graph shows $y = x^2 - 2x - 8$. Write down (a) the roots of the equation, and (b) the coordinates of the turning point.



Answer _____

teachably

[2 marks]

Q9

Grade 6

AQA style

By factorising, find the roots of $y = x^2 + 3x - 10$.

Answer _____

teachably

[2 marks]

Q10

Grade 7

AQA style

By completing the square, find the turning point of $y = x^2 + 4x + 1$.

Answer

teachably

[2 marks]

OCR-style questions

Q11

Grade 5

OCR style

For $y = 2x^2 - 5$, work out the value of y when $x = -2$, $x = 0$ and $x = 2$.

Answer _____

teachably

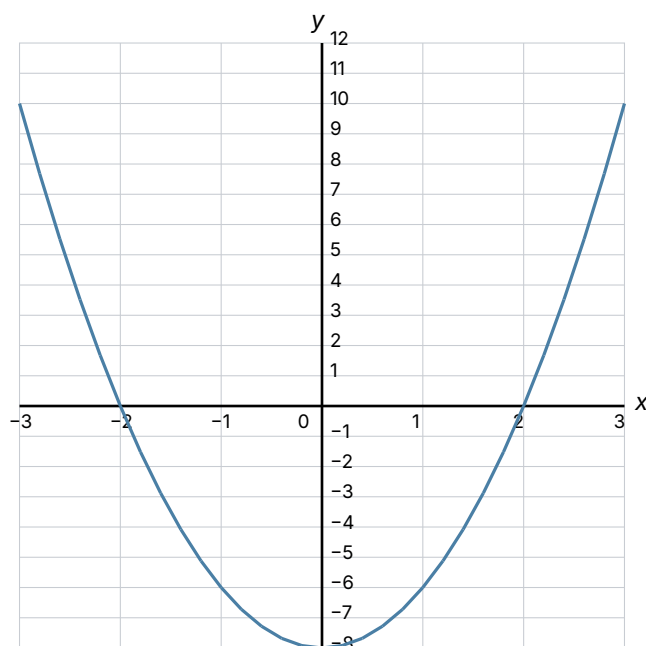
[3 marks]

Q12

Grade 5

OCR style

The graph shows $y = 2x^2 - 8$. Use the graph to find the value of y when $x = 3$, and the value of y when $x = -1$.



Answer _____

teachably

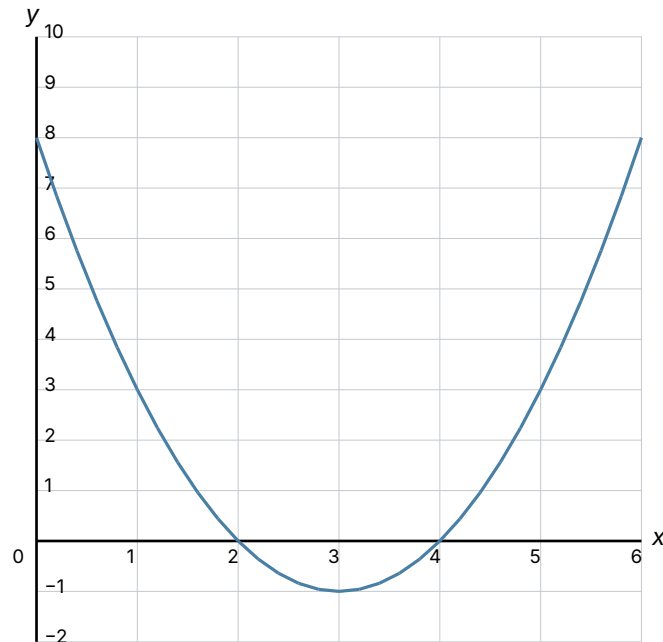
[2 marks]

Q13

Grade 5

OCR style

The graph shows $y = x^2 - 6x + 8$. Write down (a) the roots of the equation, and (b) the coordinates of the turning point.



Answer _____

teachably

[2 marks]

Q14

Grade 6

OCR style

By factorising, find the roots of $y = x^2 - x - 12$.

Answer _____

teachably

[2 marks]

Q15

Grade 7

OCR style

By completing the square, find the turning point of $y = x^2 - 8x + 10$.

Answer

teachably

[2 marks]

Teachably-style questions

Q16

Grade 5

Teachably style

For $y = x^2 + x - 6$, work out the value of y when $x = -3$, $x = 0$ and $x = 2$.

Answer _____

teachably

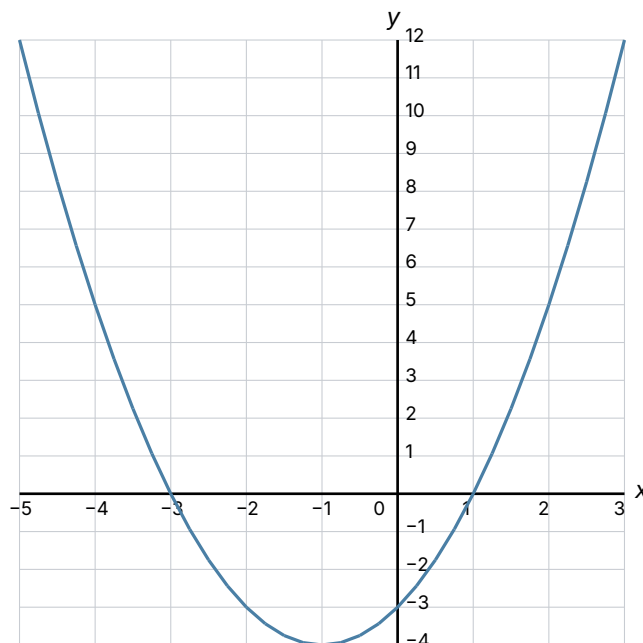
[3 marks]

Q17

Grade 5

Teachably style

The graph shows $y = x^2 + 2x - 3$. Use the graph to find the value of y when $x = 2$, and the value of y when $x = -2$.



Answer _____

teachably

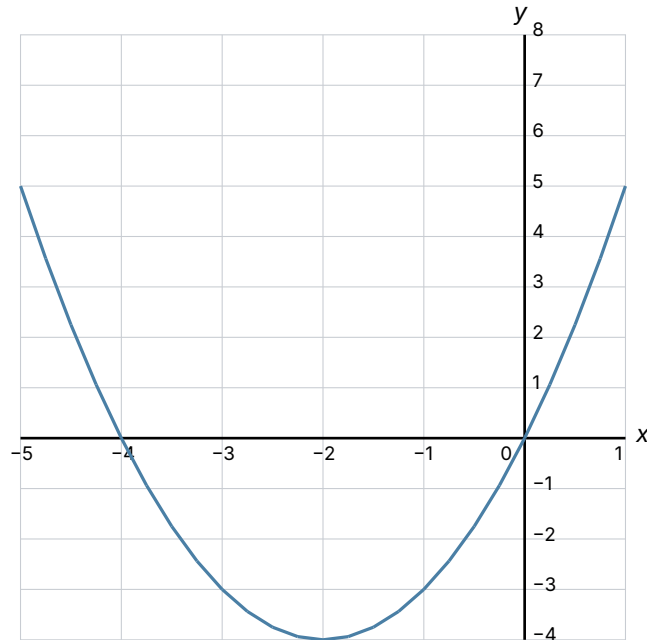
[2 marks]

Q18

Grade 5

Teachably style

The graph shows $y = x^2 + 4x$. Write down (a) the roots of the equation, and (b) the coordinates of the turning point.



Answer _____

teachably

[2 marks]

Q19

Grade 6

Teachably style

By factorising, find the roots of $y = x^2 + 7x + 12$.

Answer _____

teachably

[2 marks]

Q20 

Grade 7

Teachably style

By completing the square, find the turning point of $y = x^2 + 2x - 5$.

Answer _____

teachably

[2 marks]

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