teachably

Name _____

Date _____

GCSE Mathematics

H

The Quadratic Formula

Higher | Grades 6-8

Total Marks	Time	Questions
60	60 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.

© Teachably. This resource may not be copied or distributed without permission.

Want help from an expert maths tutor?
Book a free GCSE Maths consultation with our team at Teachably. Visit teachably.co.uk/book-call to get started.

Edexcel-style questions

Q1

Grade 6 Edexcel style

Solve $2x^2 + 3x - 7 = 0$. Give your answers correct to 2 decimal places.

Answer _____

teachably **[3 marks]**

Q2

Grade 7 Edexcel style

Solve $4x^2 - 7x - 3 = 0$. Give your answers correct to 2 decimal places.

Answer _____

teachably **[3 marks]**

Q3

Grade 7 Edexcel style

Solve $2x^2 + 5x - 9 = 0$. Give your answers correct to 3 significant figures.

Answer _____

teachably **[3 marks]**

Q4

Grade 8 Edexcel style

Work out the discriminant of $2x^2 + 3x + 5 = 0$ and state the number of real solutions.

Answer _____

teachably **[2 marks]**

Q5

Grade 8 Edexcel style

A rectangle has length $(x + 4)$ cm and width x cm. Its area is 30 cm². Form and solve a quadratic equation to find the value of x, correct to 2 decimal places ($x > 0$).

Answer _____

teachably **[4 marks]**

AQA-style questions

Q6

Grade 6 AQA style

Solve $x^2 + 4x - 3 = 0$. Give your answers correct to 2 decimal places.

Answer _____

teachably **[3 marks]**

Q7

Grade 7 AQA style

Solve $2x^2 - 9x + 3 = 0$. Give your answers correct to 2 decimal places.

Answer _____

teachably **[3 marks]**

Q8

Grade 7 AQA style

Solve $3x^2 + 8x - 2 = 0$. Give your answers correct to 3 significant figures.

Answer _____

teachably **[3 marks]**

Q9

Grade 8 AQA style

Work out the discriminant of $x^2 - 6x + 9 = 0$ and state the number of real solutions.

Answer _____

teachably **[2 marks]**

Q10

Grade 8 AQA style

A rectangle has length $(x + 5)$ cm and width x cm. Its area is 20 cm². Form and solve a quadratic equation to find the value of x, correct to 2 decimal places ($x > 0$).

Answer _____

teachably **[4 marks]**

OCR-style questions

Q11

Grade 6 OCR style

Solve $3x^2 - 5x - 1 = 0$. Give your answers correct to 2 decimal places.

Answer _____

teachably **[3 marks]**

Q12

Grade 7 OCR style

Solve $5x^2 + 2x - 6 = 0$. Give your answers correct to 2 decimal places.

Answer _____

teachably **[3 marks]**

Q13

Grade 7 OCR style

Solve $4x^2 - 3x - 5 = 0$. Give your answers correct to 3 significant figures.

Answer _____

teachably **[3 marks]**

Q14

Grade 8 OCR style

Work out the discriminant of $3x^2 + 5x - 2 = 0$ and state the number of real solutions.

Answer _____

teachably **[2 marks]**

Q15

Grade 8 OCR style

A rectangle has length $(x + 2)$ cm and width x cm. Its area is 25 cm². Form and solve a quadratic equation to find the value of x, correct to 2 decimal places ($x > 0$).

Answer _____

teachably **[4 marks]**

Teachably-style questions

Q16

Grade 6 Teachably style

Solve $x^2 - 6x + 4 = 0$. Give your answers correct to 2 decimal places.

Answer _____

teachably **[3 marks]**

Q17

Grade 7 Teachably style

Solve $3x^2 - 4x - 5 = 0$. Give your answers correct to 2 decimal places.

Answer _____

teachably **[3 marks]**

Q18

Grade 7 Teachably style

Solve $x^2 + 5x - 8 = 0$. Give your answers correct to 3 significant figures.

Answer _____

teachably **[3 marks]**

Q19

Grade 8 Teachably style

Work out the discriminant of $x^2 + 2x + 4 = 0$ and state the number of real solutions.

Answer _____

teachably **[2 marks]**

Q20

Grade 8 Teachably style

A rectangle has length $(x + 6)$ cm and width x cm. Its area is 15 cm². Form and solve a quadratic equation to find the value of x, correct to 2 decimal places ($x > 0$).

Answer _____

teachably **[4 marks]**

END OF PAPER

Want help from an expert maths tutor?
Book a free GCSE Maths consultation with our team at Teachably. Visit teachably.co.uk/book-call to get started.