

Solving Quadratics by Factorising

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **32**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** Write down the two solutions of $(x + 3)(x - 5) = 0$

[1 mark]

Answer _____

- 2** Which of these is a solution of $x^2 - 4x - 12 = 0$?
Circle your answer.

[1 mark]

−6

−2

2

4

- 3** Factorise and solve $x^2 - 9x + 14 = 0$

[2 marks]

Answer _____

4 Solve $x^2 + 6x + 8 = 0$

[3 marks]

Answer _____

5 Solve $x^2 - 2x - 24 = 0$

[3 marks]

Answer _____

6 Solve $x^2 + 2x - 15 = 0$

[3 marks]

Answer _____

7 (a) Solve $x^2 = 169$

[2 marks]

Answer _____

(b) Ella says,

‘The solutions of $x^2 + 25 = 0$ are $x = 5$ and $x = -5$ ’

Explain why Ella is wrong.

[1 mark]

8 Solve $x^2 - 9x = 0$

[3 marks]

Answer _____

9 Solve $x^2 - 64 = 0$

[2 marks]

Answer _____

10 Solve $x^2 - 8x + 16 = 0$

[2 marks]

Answer _____

11 Liam says,

‘The solutions of $(x - 3)(x + 7) = 0$ are $x = -3$ and $x = 7$ ’

Is Liam correct? Tick a box.

Give a reason for your answer.

[2 marks]

☐ Yes

☐ No

12 A rectangle has length $(x + 3)$ cm and width x cm.
The area of the rectangle is 40 cm^2 .

Work out the value of x .

[4 marks]

$x =$ _____

13 Solve $x^2 + 3x = 10$

[3 marks]

Answer _____