

Solving Quadratics by Factorising

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **30**

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

- 1** (a) Write down the two solutions of $(x - 6)(x + 1) = 0$

.....
(1)

- (b) Write down a quadratic equation that has solutions $x = 2$ and $x = -9$

.....
(1)

(Total for Question 1 is 2 marks)

2 (a) Factorise $x^2 + 2x - 35$

.....
(2)

(b) Hence solve $x^2 + 2x - 35 = 0$

.....
(1)
(Total for Question 2 is 3 marks)

3 Solve $x^2 + 7x + 12 = 0$

.....
(3)
(Total for Question 3 is 3 marks)

4 Solve $x^2 - 3x - 10 = 0$

.....
(3)

(Total for Question 4 is 3 marks)

5 Solve $x^2 - 10x + 21 = 0$

.....
(3)

(Total for Question 5 is 3 marks)

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

.....
(2)

(Total for Question 6 is 2 marks)

7 Solve $x^2 - 49 = 0$

.....
(2)

(Total for Question 7 is 2 marks)

8 Solve $x^2 + x - 20 = 0$

.....
(3)

(Total for Question 8 is 3 marks)

9 Solve $x^2 = 5x + 14$

.....
(3)

(Total for Question 9 is 3 marks)

- 10** Nadia says,
' $x = 0$ is a solution of $x^2 + bx = 0$ for every value of b .'

Is Nadia correct?

You must give a reason for your answer.

(1)

(Total for Question 10 is 1 mark)

- 11** The length of a rectangle is 4 cm more than its width, x cm.
The area of the rectangle is 45 cm^2 .

Work out the length of the rectangle.

..... cm
(5)

(Total for Question 11 is 5 marks)
