

Factorising Quadratics

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

Name _____

Total marks: **29**

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

1 Factorise $x^2 + 5x + 4$

.....
(2)

(Total for Question 1 is 2 marks)

2 Factorise $x^2 + 8x + 16$

.....
(2)

(Total for Question 2 is 2 marks)

3 Factorise $x^2 - 4x - 21$

.....
(2)

(Total for Question 3 is 2 marks)

4 Factorise $x^2 + 11x + 18$

.....
(2)

(Total for Question 4 is 2 marks)

5 Factorise

(a) $x^2 - 81$

.....
(1)

(b) $y^2 - 1$

.....
(1)

(Total for Question 5 is 2 marks)

6 Factorise $x^2 - 7x + 12$

.....
(2)

(Total for Question 6 is 2 marks)

7 Factorise $x^2 + 2x - 35$

.....
(2)

(Total for Question 7 is 2 marks)

8 (a) Expand and simplify $(x + 3)(x - 8)$

.....
(2)

(b) Factorise $x^2 - 2x - 24$

.....
(2)

(Total for Question 8 is 4 marks)

9 (a) Factorise $x^2 - 3x$

.....
(1)

(b) Factorise $x^2 - 3x - 10$

.....
(2)

(Total for Question 9 is 3 marks)

10 The area of a square is $(x^2 + 12x + 36) \text{ cm}^2$

(a) Find an expression, in terms of x , for the length of one side of the square.

..... cm
(2)

(b) Find an expression, in terms of x , for the perimeter of the square.
Give your answer without brackets.

..... cm
(1)

(Total for Question 10 is 3 marks)

11 Factorise $x^2 - x - 30$

.....
(2)

(Total for Question 11 is 2 marks)

12 Priya says,
‘ $x^2 + 9$ factorises to $(x + 3)(x - 3)$ ’

Explain why Priya is wrong.

.....
(1)

(Total for Question 12 is 1 mark)

- 13 The diagram shows a rectangle.

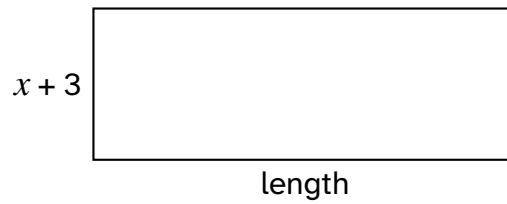


Diagram **NOT** accurately drawn

The area of the rectangle is $(x^2 + 11x + 24) \text{ cm}^2$

Use factorising to find the length of the rectangle. Give your answer in terms of x .

..... cm
(2)

(Total for Question 13 is 2 marks)
