

Expanding and Factorising

Question Paper

Level	OCR
Subject	Maths
Exam Board	GCSE (9-1)
Topic	Algebra
Sub Topic	Expanding and Factorising
Grade Level	Grade 4
Booklet	Question Paper

Time Allowed: 59 minutes

Score: /49

Percentage: /100

1 (a) Factorise.

$$x^2 - 25x$$

(a) [1]

(b) Factorise.

$$x^2 - 25$$

(b) [1]

(c) Multiply out and simplify.

$$(x - 25)(x + 10)$$

(c) [2]

2 (a) Multiply out and simplify fully.

$$(x - 1)(2x + 5)$$

(a) [3]

(b) Solve.

$$(x - 1)(2x + 5) = 0$$

(b) [2]

(c) Factorise.

$$x^2 - 2x - 24$$

(c) [2]

3 (a) Factorise.

$$5x + 10$$

(a) _____ [1]

(b) Multiply out the brackets and simplify completely.

(i) $x(x^2 - 5)$

(b)(i) _____ [2]

(ii) $3(x + 2) + 4(2x - 1)$

(ii) _____ [3]

- 4 (a) Multiply out the brackets and simplify your answer.

$$4(x + 3) + 3(2x - 5)$$

(a) _____ [3]

- (b) Factorise this expression completely.

$$5xy + 10x$$

(b) _____ [2]

5 (a) Factorise.

$$6x + 8$$

(a) _____ [1]

(b) Work out the value of $x^2 - 9$ when

(i) $x = 5$,

(b)(i) _____ [1]

(ii) $x = -4$.

(ii) _____ [1]

(c) Factorise.

$$x^2 - 9$$

(c) _____ [1]

6 (a) Solve.

(i) $3x + 7 = 15 - 2x$

(a)(i) _____ [3]

(ii) $\frac{8}{x} = 2$

(ii) _____ [1]

(iii) $3x^2 = 75$

(iii) _____ [3]

(b) Expand.

$$4x(2x - 7)$$

(b) _____ [2]

(c) Factorise.

$$6 + 8x$$

(c) _____ [1]

(d) Make x the subject of the following.

$$x + 3 = 2a + bx$$

(d) _____ [4]

7 (a) Simplify.

$$3a^2 \times 4a$$

(a) _____ [2]

(b) Work out the value of $4b^2$ when $b = -2.5$.

(b) _____ [2]

(c) Solve.

$$5(2x - 7) = 3$$

(c) _____ [3]

(d) Factorise.

$$12x^2 + 8xy$$

(d) _____ [2]