Chhetri Academy

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GCSE MATHS

Algebra

Edexcel 1MA1 | Subtopic collection Topic 12

Expanding brackets

Foundation tier

Past paper question booklet

26	2012-2025	Foundation
question groups	available papers	tier

Before you begin

1. Show working and use units where appropriate.
2. Use extra paper if you need more space.
3. Print at actual size (100%) for measurement questions.

Name _____ **Date** _____

Whole questions are retained for context; some parts cover other points. Legacy sources are labelled.

25 (a) Expand $3(2y - 5)$

.....
(1)

(b) Factorise completely $8x^2 + 4xy$

.....
(2)

(c) Make h the subject of the formula

$$t = \frac{gh}{10}$$

$h =$ .....
(2)

(Total for Question 25 is 5 marks)

14 (a) Expand and simplify $5(x + 7) + 3(x - 2)$

.....

(2)

(b) Factorise completely $3a^2b + 6ab^2$

.....

(2)

(Total for Question 14 is 4 marks)

20 (a) Factorise $3t + 12$

.....

(1)

(b) Expand and simplify $7(2x + 1) + 6(x + 3)$

.....

(2)

(Total for Question 20 is 3 marks)

27 (a) Expand $3(x + 4)$

.....

(1)

(b) Expand $x(x^2 + 2)$

.....

(2)

(c) Factorise $x^2 - 6x$

.....

(1)

(Total for Question 27 is 4 marks)

23 (a) Solve $x + 9 = 19$

.....

(1)

(b) Solve $2y = 17$

.....

(1)

(c) Solve $\frac{w}{4} = 8$

.....

(1)

(d) Expand $3(2 + t)$

.....

(1)

(Total for Question 23 is 4 marks)

16 (a) Expand $5(m + 2)$

.....

(1)

(b) Factorise $y^2 + 3y$

.....

(1)

(c) Simplify $a^5 \times a^4$

.....

(1)

(Total for Question 16 is 3 marks)

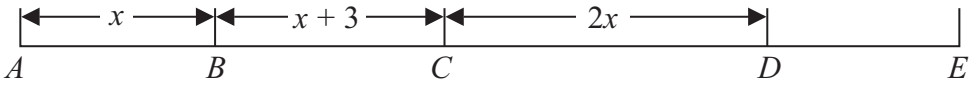
15 (a) Expand $5(2c + 3d)$

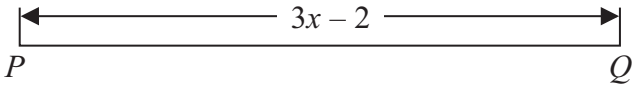
.....

(1)

(b) Here are two straight lines, $ABCDE$ and PQ.

Diagrams **NOT** accurately drawn





In the diagrams all the lengths are in cm.
$AE = 2PQ$.
Find an expression, in terms of x, for the length of DE.
Give your answer in its simplest form.

..... cm

(4)

(Total for Question 15 is 5 marks)

23 (a) Expand $2m(m + 3)$

.....

(1)

(b) Factorise fully $3xy^2 - 6xy$

.....

(2)

(Total for Question 23 is 3 marks)

23 (a) Factorise $3x + 6$

.....

(1)

(b) Expand and simplify $5(y - 2) + 2(y - 3)$

.....

(2)

(Total for Question 23 is 3 marks)

20 (a) Simplify $p^2 \times p^5$

.....

(1)

(b) Expand and simplify $3(m + 4) - 2(4m + 1)$

.....

(2)

(c) Factorise $n^2 - 7n$

.....

(1)

(Total for Question 20 is 4 marks)

16 (a) Expand and simplify $7a + 4(a - 2b)$

.....

(2)

(b) Simplify $n^6 \times n^5$

.....

(1)

(c) Factorise $5x + 10$

.....

(1)

(Total for Question 16 is 4 marks)

24 (a) Solve $2x^2 = 72$

.....

(2)

(b) Expand and simplify $(2x + 1)(3x - 2)$

.....

(2)

(c) Factorise $x^2 + 6x + 9$

.....

(1)

(Total for Question 24 is 5 marks)

16 $P = 4x + 3y$

$x = 5$
$y = -2$

(a) Work out the value of P.

.....

(2)

(b) Expand $4e(e + 2)$

.....

(2)

(c) Solve $3(m - 4) = 21$

$m =$ .....

(2)

(Total for Question 16 is 6 marks)

Question 14

June 2018 | 1MA1/3F | Original Q20

20 Expand and simplify $5(p + 3) - 2(1 - 2p)$

.....

(Total for Question 20 is 2 marks)

Question 15

November 2018 | 1MA1/2F | Original Q26

26 (a) Expand and simplify $(5x + 2)(2x - 3)$

.....

(2)

(b) Factorise $x^2 + 4x + 3$

.....

(2)

(Total for Question 26 is 4 marks)

Question 16

June 2019 | 1MA1/1F | Original Q16

16 (a) Expand $5(2m - 3)$

.....

(1)

(b) Factorise $3n + 12$

.....

(1)

(Total for Question 16 is 2 marks)

22 (a) Expand and simplify $(x + 5)(x - 9)$

.....

(2)

(b) Factorise fully $9x^2 + 6x$

.....

(2)

(Total for Question 22 is 4 marks)

19 (a) Expand $x(x - 4)$

.....

(1)

(b) Factorise $15y - 10$

.....

(1)

(c) Solve $7(f - 5) = 28$

$f =$ .....

(2)

(Total for Question 19 is 4 marks)

15 (a) Expand $2(a + d)$

.....

(1)

(b) Factorise $6y^2 - 5y$

.....

(1)

(c) Solve $4x - 7 = 37$

$x =$.....

(2)

(Total for Question 15 is 4 marks)

17 (a) Expand $y(y + 5)$

.....

(1)

(b) Factorise $4a - 6$

.....

(1)

(c) Solve $2(5x - 4) = 21$

$x =$ .....

(3)

(d) Simplify $4e^2f \times 5ef^3$

.....

(2)

(Total for Question 17 is 7 marks)

21 (a) Simplify $(x^3)^5$

.....

(1)

(b) Expand and simplify $4(x + 3) + 7(4 - 2x)$

.....

(2)

(c) Factorise fully $15x^3 + 3x^2y$

.....

(2)

(Total for Question 21 is 5 marks)

17 (a) Expand $3(4 - 2x)$

.....

(1)

(b) Solve $\frac{3y}{4} = 12$

$y =$ .....

(2)

(c) Factorise $4p + 6$

.....

(1)

(Total for Question 17 is 4 marks)

20 (a) Simplify $(m^2)^3$

.....

(1)

(b) Simplify $x^5 \times x^8$

.....

(1)

(c) Expand $4p(p^2 + 3p)$

.....

(2)

(Total for Question 20 is 4 marks)

27 (a) Expand and simplify $(3x + 2)(2x – 5)$

.....

(2)

(b) Factorise $x^2 – 16$

.....

(1)

(Total for Question 27 is 3 marks)

22 (a) Expand and simplify $3(2y - 5) + 7(y + 2)$

.....

(2)

(b) Factorise fully $6x^2 + 15x$

.....

(2)

(c) Make g the subject of the formula $f = 3g + 11$

.....

(2)

(Total for Question 22 is 6 marks)

21 (a) Simplify $y^{10} \div y^2$

.....

(1)

(b) Simplify $(e^3)^2$

.....

(1)

(c) Expand $x(3x^2 + 5)$

.....

(1)

(d) Expand and simplify $(n + 5)(n - 2)$

.....

(2)

(Total for Question 21 is 5 marks)