

Expanding Single Brackets

Booklet 1 – Revision practice – 15 minutes

Name:	Date:	Time: 15 min	Score: / 25
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Remember

Multiply everything inside the bracket by the term outside it.

$$6(n+3) = 6n + 18 \quad 4t(t+2) = 4t^2 + 8t$$

Take care with signs: a negative outside flips the sign of every term inside. $-7(k-1) = -7k + 7$

Section A: Warm-up Level 1 of 3 · 1 mark each

Expand the brackets.

1. Expand $3(x+4)$

Answer: _____

2. Expand $5(y-2)$

Answer: _____

3. Expand $2(3a+1)$

Answer: _____

4. Expand $x(x+5)$

Answer: _____

5. Expand $6(2c+5d)$

Answer: _____

Section B: Building confidence Level 2 of 3 · 1 mark each · watch the signs!

6. Expand $-3(x+2)$

Answer: _____

7. Expand $-2(y-5)$

Answer: _____

8. Expand $-4(2a-3)$

Answer: _____

9. Expand $3x(x+4)$

Answer: _____

10. Expand $2p(3p-5)$

Answer: _____

11. Expand $-5m(2m+3)$

Answer: _____

- 12.** Expand and simplify $3(x+2) + 4(x-1)$ [2 marks]

Answer: _____

- 13.** Expand and simplify $5(2y+3) - 2(y+4)$ [2 marks]

Answer: _____

- 14.** Sam says that $4(x+3) = 4x + 3$
(a) Explain Sam's mistake. [1 mark]

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(b) Write the correct expansion of $4(x+3)$. [1 mark]

Answer: _____

- 15.** Expand and simplify $3a(2a+1) - a(a-4)$ [2 marks]

Answer: _____

- 16.** A rectangle has length 6 cm and width $(2x-1)$ cm.
(a) Write an expression for the area of the rectangle. Expand any brackets. [2 marks]

Answer: _____

- (b) Work out the area when $x = 4$. [1 mark]

Answer: _____

- 17.** Expand and simplify $2(3x+1) - 5(x-2) + 4x$ [3 marks]

Answer: _____

END OF BOOKLET – check your answers on the next page

Answers and mark scheme

Booklet 1: Expanding Single Brackets (M = method mark, A = accuracy mark)

Q	Answer	Marking notes / watch out for
1	$3x+12$	
2	$5y-10$	
3	$6a+2$	
4	x^2+5x	$x \times x = x^2$. A common slip is writing $2x$.
5	$12c+30d$	Both terms need multiplying by 6.
6	$-3x-6$	$-3 \times 2 = -6$
7	$-2y+10$	Negative $\times$ negative = positive. Common error: $-2y-10$.
8	$-8a+12$	
9	$3x^2+12x$	
10	$6p^2-10p$	
11	$-10m^2-15m$	
12	$7x+2$	M1 for $3x+6+4x-4$ (or 3 terms correct). A1 for $7x+2$.
13	$8y+7$	M1 for $10y+15-2y-8$. A1 for $8y+7$. Common error: -2×4 handled as $+8$.
14	(a) Sam only multiplied the x by 4 – he did not multiply the 3. (b) $4x+12$	1 mark for the explanation (the 3 must also be multiplied by 4). 1 mark for $4x+12$.
15	$5a^2+7a$	M1 for $6a^2+3a-a^2+4a$. A1 for $5a^2+7a$. Key trap: $-a \times -4 = +4a$.
16	(a) $12x-6$ (b) 42 cm^2	(a) M1 for $6(2x-1)$, A1 for $12x-6$. (b) 1 mark: $12 \times 4 - 6 = 42$; units cm^2 expected.
17	$5x+12$	M1 $6x+2$; M1 $-5x+10$; A1 $5x+12$. Trap: $-5 \times -2 = +10$, not -10 .

How did you do? (out of 25)

Green – 20 or more: brilliant, try the next booklet.

Amber – 13 to 19: good progress – redo the questions you lost marks on.

Red – under 13: re-read the worked examples, then try the booklet again in a few days.