

Expanding Double and Triple Brackets

For AQA GCSE Mathematics (8300) • Higher tier

Name _____

Total marks: **29**

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

1 Expand and simplify

(a) $(x + 3)(x - 5)$

[2 marks]

Answer _____

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

[2 marks]

Answer _____

2 Circle the expansion of $(x - 4)^2$

[1 mark]

$x^2 + 16$

$x^2 - 16$

$x^2 - 8x + 16$

$x^2 - 8x - 16$

3 Expand and simplify

(a) $(x + 1)(x + 3)(x + 4)$

[3 marks]

Answer _____

(b) $(2x + 1)^2(x - 3)$

[3 marks]

Answer _____

4 $(x + a)(x + 5) \equiv x^2 + bx + 15$
Work out the values of a and b .

[2 marks]

Answer $a =$ _____ $b =$ _____

- 5 Expand and simplify $(3x^2 - 1)(x + 4) - 3x(x^2 + 2)$

[4 marks]

Answer _____

- 6 Expand and simplify $(x - 3)(2x + y)^2$

[4 marks]

Answer _____

- 7 A cuboid has length $(x + 4)$ cm, width $(x - 1)$ cm and height $(2x + 3)$ cm.
Show that the volume, in cm^3 , is $2x^3 + 9x^2 + x - 12$

[3 marks]

8 (a) Expand and simplify fully $(x + 3)(2x + 1)(x + 4)$

[3 marks]

Answer _____

(b) Use your answer from part (a) to work out $103 \times 201 \times 104$

[2 marks]

Answer _____