

8300

GCSE MATHEMATICS

Foundation and Higher tier – Questions by Topic

Algebra

Expanding single brackets - including when simplification is then needed

v1.0

Name _____

Materials

For this paper you must have:

- Mathematical instruments

Information

- The marks for questions are shown in brackets

Advice

- In all calculations, show clearly how you work out your answer

For questions 1 to 3 you must **NOT** use a calculator.



Q1.

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

(Total 2 marks)

Q2.

Lucy wants to simplify $6a - (7b - 2a)$

She writes $4a - 7b$

Is she correct?

Write Yes or No

And give a reason for your answer.

(Total 1 mark)

Q3(H).

Multiply out $x(x + 3)$

(Total 2 marks)

For the rest of the questions, you may use a calculator.



Q4.

Multiply out $3(2x + 8)$

(Total 2 marks)

Q5.

Simplify fully $4(a + 2) + a$

(Total 2 marks)

Q6.

Multiply out $5c(2d + 1)$

(Total 2 marks)

Q7.

Multiply out $5x(3x - 2)$

(Total 2 marks)

Q8.

Expand and simplify fully $4(2c + 3) - (5c - 1)$

(Total 2 marks)

Q9.

Multiply out $x(x - 4)$

Circle your answer.

$x^2 - 4$

$2x - 4$

$x^2 - 4x$

$-3x^2$

(Total 1 mark)

Q10.

Simplify $7x - (3x - 2x)$

Circle your answer.

$7x - 1$

$2x$

$6x$

$8x$

(Total 1 mark)

Q11(H).

Show that $4x(3x + 2) - 2x^2\left(6 - \frac{5}{x}\right) - 6x\left(3 + \frac{7}{x}\right)$ simplifies to an integer.

(Total 3 marks)

Q12(H).

Expand $6x^2(x^3 + 2)$

Circle your answer.

$6x^5 + 2$

$6x^6 + 2$

$6x^5 + 12x^2$

$6x^6 + 12x^2$

(Total 1 mark)

Q13(H).

Expand $4x^2(3x + 5)$

Circle your answer.

$32x^3$

$12x^3 + 20x^2$

$7x^3 + 9x^2$

$12x^2 + 5$

(Total 1 mark)