

Expanding Single Brackets

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **42**

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

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

[1 mark]

Answer _____

(b) Multiply out $5(2y - 1)$

[1 mark]

Answer _____

(c) Multiply out $3(10 - x)$

[1 mark]

Answer _____

2 Which expression is equivalent to $6(2a - 3)$?
Circle your answer.

[1 mark]

$12a - 3$

$8a - 9$

$12a - 18$

$12a + 18$

3 (a) Multiply out $x(x - 4)$

[1 mark]

Answer _____

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

[2 marks]

Answer _____

4 Sam multiplies out $5(3y - 2)$

He writes $15y - 2$

What mistake has Sam made?

[1 mark]

5 (a) Expand and simplify $3(x + 2) + 4(x + 5)$

[2 marks]

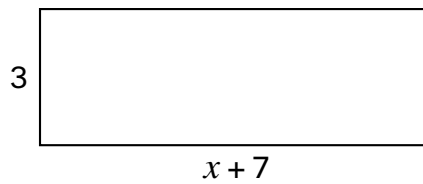
Answer _____

(b) Simplify fully $3(m - 4) + 2m$

[2 marks]

Answer _____

- 6 Here is a rectangle.
All lengths are in centimetres.



Not drawn accurately

Work out an expression for the area of the rectangle.
Give your answer without brackets.

[2 marks]

Answer _____ cm^2

- 7 Simplify $8b - (3b + 4)$
Circle your answer.

[1 mark]

$5b + 4$

$5b - 4$

$11b - 4$

$5b$

8 Tick **one** box for each statement.

[2 marks]

	True	False
$2(x + 4) = 2x + 8$	☐	☐
$3(y - 2) = 3y - 2$	☐	☐
$-(a - 5) = -a + 5$	☐	☐
$x(x + 1) = x^2 + 1$	☐	☐

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

[3 marks]

Answer _____

10 (a) Write the missing terms in the boxes.

$$4(\boxed{} + 3) = 8x + \boxed{}$$

[1 mark]

(b) Write the missing numbers in the boxes.

$$\boxed{}(3y - \boxed{}) = 15y - 10$$

[1 mark]

11 Priya works in a shop.

On weekdays she is paid $\pounds h$ per hour.

At the weekend she is paid $\pounds 3$ more per hour than on weekdays.

One week she works 6 hours on weekdays and 4 hours at the weekend.

- (a) Write an expression, in terms of h , for the total amount, in pounds, that Priya is paid that week.

Give your answer in its simplest form.

[3 marks]

Answer $\pounds$ _____

- (b) That week Priya is paid $\pounds 132$ in total.

Work out how much she is paid per hour at the weekend.

[2 marks]

Answer $\pounds$ _____

12 Show that $4(x + 3) + 2(x - 1) \equiv 2(3x + 5)$

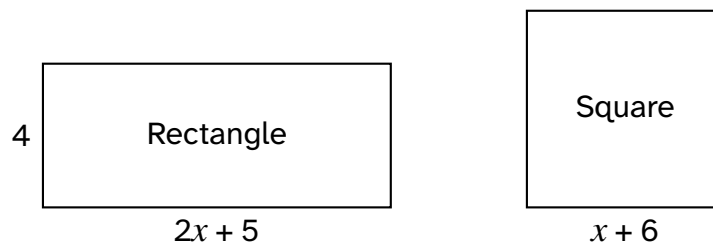
[3 marks]

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

[3 marks]

Answer _____

14 Here are a rectangle and a square.
All lengths are in centimetres.



Not drawn accurately

Show that the perimeter of the square is always 6 cm more than the perimeter of the rectangle.

[3 marks]

- 15** Jo thinks of a number, n .
She multiplies it by 3 and then adds 4.
She then multiplies the result by 2.
- (a) Write an expression, in terms of n , for Jo's final answer.
Give your answer without brackets.

[2 marks]

Answer _____

- (b) Jo says,
 'If n is a whole number, my final answer is always even.'
Is she correct? Tick a box.
Give a reason for your answer.

[1 mark]

☐ Yes ☐ No

- 16** a and b are whole numbers.
 $5(2x + a) - 3x \equiv bx + 20$
Work out the values of a and b .

[3 marks]

$a =$ _____ $b =$ _____