Expanding single brackets

ANSWERS

1 multiply every term inside

Expand $4(x + 5)$

	x	$+5$
4	$4x$	$+20$

Answer $4x + 20$

2

Expand $5(x - 3)$

	x	-3
5	$5x$	-15

Answer $5x - 15$

3

Expand $6(2x + 1)$

	$2x$	$+1$
6	$12x$	$+6$

Answer $12x + 6$

4 Notice the change!

Expand $x(x + 7)$

	x	$+7$
x	x^2	$+7x$

Answer $x^2 + 7x$

5 a negative outside

Expand $-3(x + 4)$

	x	$+4$
-3	$-3x$	-12

Answer $-3x - 12$

6 collect like terms

Expand and simplify

$5(x + 2) + 3(x - 4)$

	x	$+2$
5	$5x$	$+10$

	x	-4
3	$3x$	-12

$5x + 10 + 3x - 12$

Answer $8x - 2$

7

Leah expands $-4(x - 2)$ and writes $-4x - 8$. Explain her mistake.
Then write the right answer.

-4×-2 is $+8$, not -8

Answer $-4x + 8$

8

Three photos sit side by side in a strip.
Each photo is $(2x + 5)$ cm wide.
Write an expression for the length of the strip using a bracket. Then expand it.



$(2x + 5)$ cm $(2x + 5)$ cm $(2x + 5)$ cm

$3(2x + 5)$

Answer $6x + 15$ cm

Expanding single brackets *further practice*

ANSWERS

9

Expand $7(3x - 2)$

$7 \times 3x = 21x$ and $7 \times -2 = -14$

Answer $21x - 14$

10

Expand $y(4y + 9)$

$y \times 4y = 4y^2$ and $y \times 9 = 9y$

Answer $4y^2 + 9y$

11

Expand $-5(2a - 3)$

$-5 \times -3 = +15$

Answer $-10a + 15$

12

Fill in the boxes.

$4(\square + \square) = 12x + 20$

$12x \div 4 = 3x$ and $20 \div 4 = 5$

Answer $4(3x + 5)$

13

A sandwich costs £x and a drink costs £2. Nine people each buy one sandwich and one drink.
Write an expression for the total cost in pounds, using a bracket. Expand it.

$9(x + 2)$

Answer $9x + 18$

14

Expand and simplify

$3(2x + 5) - 2(x + 4)$

$6x + 15 - 2x - 8$

Answer $4x + 7$

15

Write expressions for the area and the perimeter of the rectangle.
Expand any brackets.



$\text{Area} = 4(3x - 1) = 12x - 4$

$\text{Perimeter} = 6x - 2 + 8 = 6x + 6$

Answer $12x - 4$ and $6x + 6$

16

Show that $4(x + 3) + 2(x - 6)$ is a multiple of 6 for any whole number x.

$4x + 12 + 2x - 12 = 6x$

Answer $6x = 6 \times x$