

# Expand a Term over a Single Bracket

Maths

Miss Davies



# Expand a Term over a Single Bracket

1. Rosie has expanded  $5(a + 4)$

$$5(a + 4) \equiv 5 \times a + 5 \times 4 \equiv 5a + 20$$

Expand these brackets.

a)  $3(2a + 5)$

e)  $3(5 + 4c)$

b)  $10(3a + 2)$

f)  $4(5c - 4)$

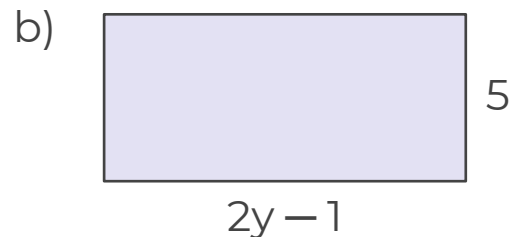
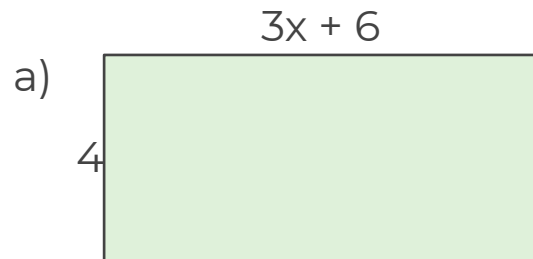
c)  $6(3 + 7b)$

g)  $-5(3f + 7)$

d)  $5(2d - 3x)$

h)  $-7(9 - 4g)$

2. Write down an expression for the area of the rectangles in their expanded form.



## Expand a Term over a Single Bracket

3. Fill in the blanks to make the statements correct.

a)  $3(\square + 5) \equiv 12a + 15$

b)  $4(3b + \square) \equiv 12b + 16$

c)  $7(2b + \square) \equiv \square + 28a$

4. Expand and simplify the expressions.

a)  $5(2h + 7) + 3$

b)  $9(4h - 5) + 2h$

c)  $4(4p + 3) - 7$

d)  $-4(2g + 3) + 3g + 2$

5. Rosie expands  $4(2x - 1)$

Here is her working out

$$4(2x - 1) \equiv 8x - 1$$

What mistake has she made?

6. Amir is 3 years older than Ben.

Ben is twice the age of Clare.

Clare is 5 years younger than David.

David is  $d$  years old.

Write a simplified expression to represent Amir's age.



# Answers



# Expand a Term over a Single Bracket

1. Rosie has expanded  $5(a + 4)$

$$5(a + 4) \equiv 5 \times a + 5 \times 4 \equiv 5a + 20$$

Expand these brackets.

a)  $3(2a + 5)$

$$\equiv 6a + 15$$

b)  $10(3a + 2)$

$$\equiv 30a + 20$$

c)  $6(3 + 7b)$

$$\equiv 18 + 42b$$

d)  $5(2d - 3x)$

$$\equiv 10d - 15x$$

e)  $3(5 + 4c)$

$$\equiv 15 + 12c$$

f)  $4(5c - 4)$

$$\equiv 20c - 16$$

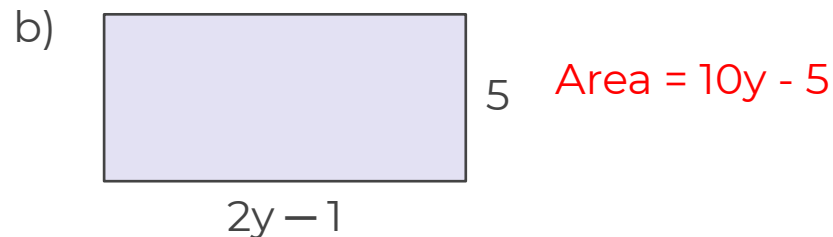
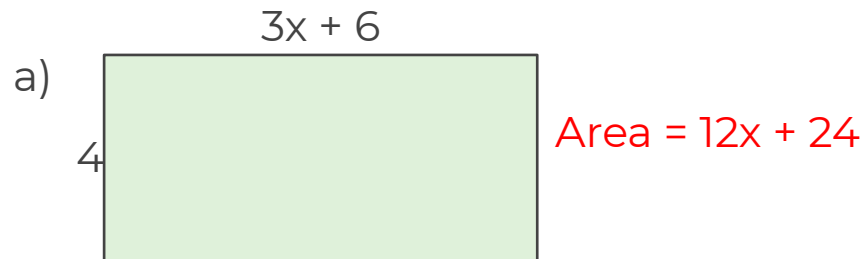
g)  $-5(3f + 7)$

$$\equiv -15f - 35$$

h)  $-7(9 - 4g)$

$$\equiv -63 + 28g$$

2. Write down an expression for the area of the rectangles in their expanded form.



## Expand a Term over a Single Bracket

3. Fill in the blanks to make the statements correct.

a)  $3(\boxed{4a} + 5) \equiv 12a + 15$

b)  $4(3b + \boxed{4}) \equiv 12b + 16$

c)  $7(2b + \boxed{4a}) \equiv \boxed{14b} + 28a$

4. Expand and simplify the expressions.

a)  $5(2h + 7) + 3 \equiv 10h + 38$

b)  $9(4h - 5) + 2h \equiv 38h - 45$

c)  $4(4p + 3) - 7 \equiv 16p + 5$

d)  $-4(2g + 3) + 3g + 2 \equiv -5g - 10$

5. Rosie expands  $4(2x - 1)$

Here is her working out

$$4(2x - 1) \equiv 8x - 1$$

What mistake has she made?

She needs to multiply 4 by -1.

6. Amir is 3 years older than Ben.

Ben is twice the age of Clare.

Clare is 5 years younger than David.

David is  $d$  years old.

Write a simplified expression to represent Amir's age.  $2d - 7$

