

Retrieve and Connect: Expanding Brackets

Year 8

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Questions and short answers

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▶ Retrieve and Connect 1

Retrieve and Connect

1) Single brackets

$$3(y + 5) = \underline{\hspace{2cm}}$$

3) Double brackets

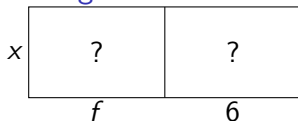
$$(x + 4)(x - 2) =$$

$$\underline{\hspace{2cm}}$$

2) Single brackets

$$a(b - 5) = \underline{\hspace{2cm}}$$

4) What is the area of the rectangle?



Retrieve and Connect

1) Single brackets

$$3(y + 5) = 3y + 15$$

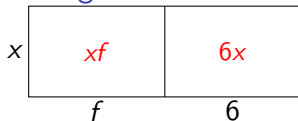
3) Double brackets

$$(x + 4)(x - 2) = x^2 + 2x - 8$$

2) Single brackets

$$a(b - 5) = ab - 5a$$

4) What is the area of the rectangle?



$$\text{Area} = x(f + 6)$$

Worked Solution: Retrieve and Connect 1, Question 1

Question: Expand $3(y + 5)$.

Worked Solution:

Worked Solution: Retrieve and Connect 1, Question 1

Question: Expand $3(y + 5)$.

Worked Solution: Multiply each term inside the bracket by 3:

$$3(y + 5) = 3 \times y + 3 \times 5 = 3y + 15.$$

Worked Solution: Retrieve and Connect 1, Question 2

Question: Expand $a(b - 5)$.

Worked Solution:

Worked Solution: Retrieve and Connect 1, Question 2

Question: Expand $a(b - 5)$.

Worked Solution: Multiply each term inside the bracket by a :

$$a(b - 5) = a \times b + a \times (-5) = ab - 5a.$$

Worked Solution: Retrieve and Connect 1, Question 3

Question: Expand $(x + 4)(x - 2)$.

Worked Solution:

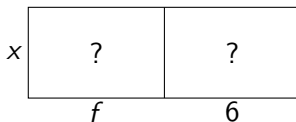
Worked Solution: Retrieve and Connect 1, Question 3

Question: Expand $(x + 4)(x - 2)$.

Worked Solution: Expand in pairs: $(x + 4)(x - 2) = x^2 - 2x + 4x - 8$.
Since $-2x + 4x = 2x$, this simplifies to $x^2 + 2x - 8$.

Worked Solution: Retrieve and Connect 1, Question 4

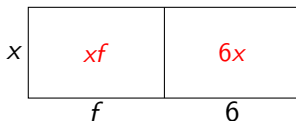
Question: What is the area of the rectangle?



Worked Solution:

Worked Solution: Retrieve and Connect 1, Question 4

Question: What is the area of the rectangle?



Worked Solution: The left rectangle has width f and height x , so its area is xf . The right rectangle has width 6 and height x , so its area is $6x$. Hence the total area is $xf + 6x = x(f + 6)$.