Name _____ Date _____

The Distributive Law

Example

×	x	4
3	$3x$	12

$3(x+4) = 3x + 12$

The rectangle has sides 3 and $x+4$. We work out the area piece by piece: $3 \times x$ and 3×4.

Remember

The distributive law: $a(b+c) = ab + ac$ and $a(b-c) = ab - ac$. The number in front of the bracket multiplies **every** term inside. Watch the sign: $-2(x-3) = -2x + 6$.

1 ON YOUR OWN Multiply out.

$4(x+2) =$ ☐

$3(2a-5) =$ ☐

$-2(x-3) =$ ☐

$x(x+4) =$ ☐

$2a(3a-b) =$ ☐

$-(4-y) =$ ☐

2 ON YOUR OWN Complete the area model and write the product.

×	x	3
5	☐	☐

$5(x+3) =$ ☐

×	$2x$	-1
x	☐	☐

$x(2x-1) =$ ☐

Names (pair) _____ Date _____

3 IN PAIRS **Find the mistake.** Marko wrote $-3(x-2) = -3x-6$. What did he do wrong? Check by substituting $x = 0$.

4 ON YOUR OWN Multiply out, then simplify.

$2(x+3)+3(x-1) =$ ☐

$5(a-2)-2(a+1) =$ ☐

$x(x+2)-x(x-3) =$ ☐

5 IN A GROUP **A trip.** Five students each pay x euros for a ticket and 3 euros for the bus. Write the total cost in two ways and work it out for $x = 8$.

☐ = ☐ for $x = 8$: ☐ €

6 ON YOUR OWN Simplify.

$3(2x-1)-2(x-4) =$ ☐

★ ON YOUR OWN **Exit card.** $4(2a-3) =$ ☐