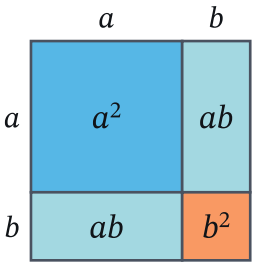
Name _____ Date _____

Squaring a Binomial

Example



$(a+b)^2 = a^2 + 2ab + b^2$

A square with side $a+b$ is made of the square a^2, the square b^2 and **two** rectangles ab.

$(a-b)^2 = a^2 - 2ab + b^2$

Remember

$(a+b)^2 = a^2 + 2ab + b^2$ and $(a-b)^2 = a^2 - 2ab + b^2$. A common mistake: $(a+b)^2 = a^2 + b^2$. Check: for $a = b = 1$ the left side is 4 and the right side is 2.

1 ON YOUR OWN Use the formula.

$(x+3)^2 =$ ☐ $(a-5)^2 =$ ☐

$(2x+1)^2 =$ ☐ $(3a-2b)^2 =$ ☐

$(y-4)^2 =$ ☐ $(5+2y)^2 =$ ☐

2 IN PAIRS **True or false?** Correct the false ones.

$(x+5)^2 = x^2 + 25$ **true** / **false**

Correction: _____

$(x-1)^2 = x^2 - 2x + 1$ **true** / **false**

Correction: _____

Names (pair) _____ Date _____

3 ON YOUR OWN **Mental maths** with the formula.

$31^2 = (30 + 1)^2 =$ ☐

$49^2 = (50 - 1)^2 =$ ☐

$99^2 =$ ☐

4 ON YOUR OWN Fill in the boxes so that the equation is true.

$x^2 +$ ☐ $+ 9 = (x +$ ☐ $)^2$

$4a^2 -$ ☐ $+ 1 = ($ ☐ $- 1)^2$

$($ ☐ $+ 3y)^2 = 4x^2 +$ ☐ $+ 9y^2$

5 IN A GROUP **Why?** Explain why $(a - b)^2$ is always greater than or equal to 0, then simplify $(x + 2)^2 - (x - 2)^2$.

$(x + 2)^2 - (x - 2)^2 =$ ☐

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