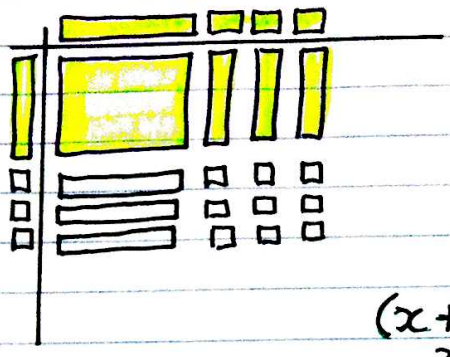
BINOMIAL → MINUS ALL SQUARE TERMS

Factoring - Difference of Squares

$(x+3)(x-3)$



- equal # of positive & negative x pieces
- unit squares are in a perfect square

$(x+3)(x-3)$

$x^2 - 3x + 3x - 9$

zero pairs

$x^2 - 9$

Perfect Square — perfect square

Examples:

$x^2 - 4$ — or: think $x^2 + 0x - 4$

$(x-2)(x+2)$

$x^2 - y^2$

$(x-y)(x+y)$

$81a^2 - 16$

$(9a-4)(9a+4)$

$4x^2 + 25$

CAN'T FACTOR

remove GCF

$2\left(\frac{2a^2}{2} - \frac{50}{2}\right)$

$2(a^2 - 25)$

$2(a-5)(a+5)$

$3x\left(\frac{3x^3}{3x} - \frac{27x}{3x}\right)$

$3x(x^2 - 9)$

$3x(x-3)(x+3)$