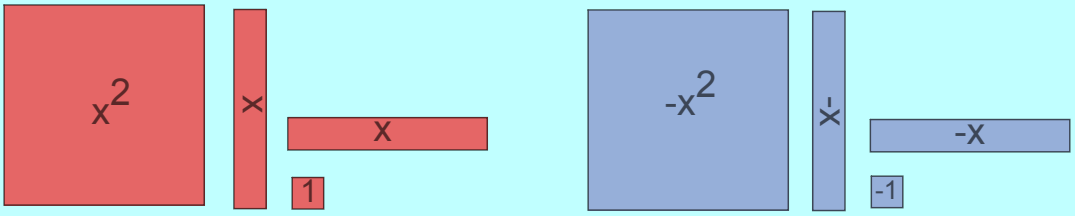
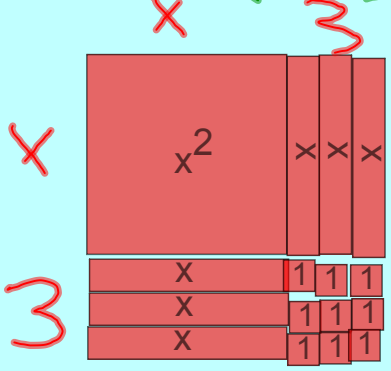
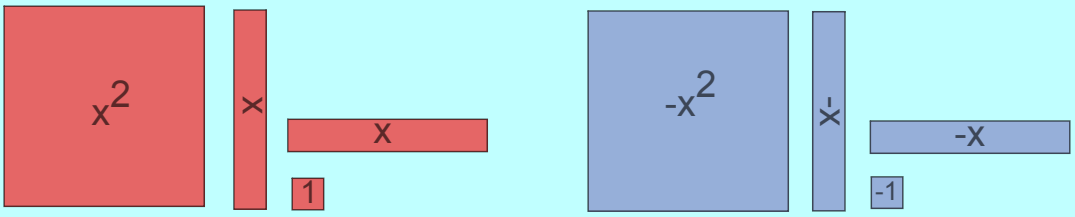


Factor: $x^2 + 6x + 9$ $=(x+3)(x+3)$

$=(x+3)^2$



Mar 25-8:02 AM



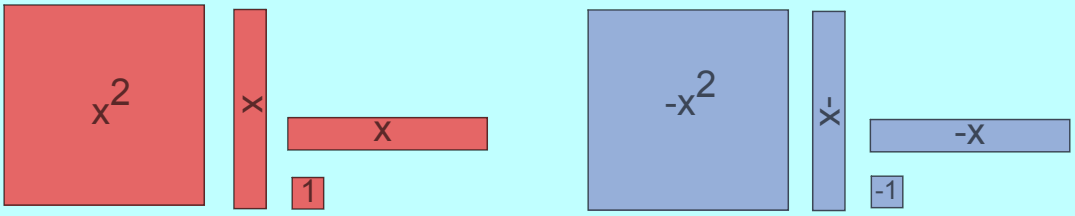
Factor: $25x^2 - 30x + 9$ $=(5x-3)(5x-3)$

	$5x$	-3
$5x$	$25x^2$	$-15x$
-3	$-15x$	9

$=(5x-3)^2$

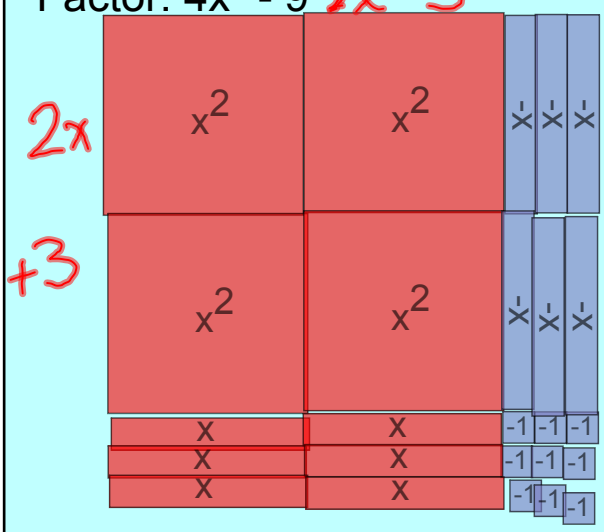
PERFECT SQUARE!

Mar 25-8:02 AM

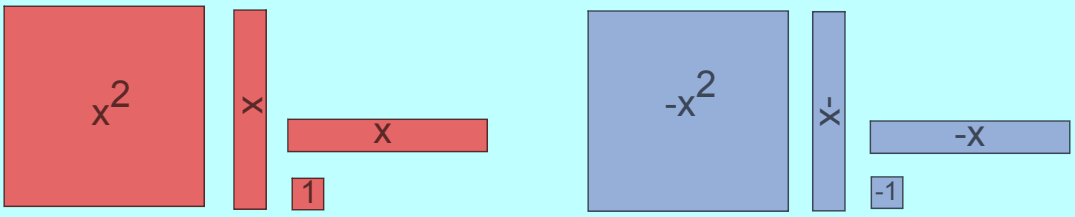


Factor: $4x^2 - 9$ $2x-3$

$=(2x-3)(2x+3)$



Mar 25-8:02 AM



Factor: $16x^2 - 25$ $= (4x-5)(4x+5)$

	$4x$	-5
$4x$	$16x^2$	$-20x$
5	$20x$	-25

$= 0$

Mar 25-8:02 AM

Factoring Special Quadratics

Apr. 9/2010

Factor Algebraically:

(a) $x^2 + 14x + 49$

$= (x+7)(x+7)$

$= (x+7)^2$

(b) $4x^2 - 20x + 25$

$= 4x^2 - 10x - 10x + 25$

$= 2x(2x-5) - 5(2x-5)$

$= (2x-5)(2x-5)$

$= (2x-5)^2$

S -20
P 100
I $-10, -10$

Apr 7-6:57 PM

Factor Algebraically:

(a) $k^2 - 121$ $= k^2 + 0k - 121$

$= (k+11)(k-11)$

(b) $9m^2 - 16$

$= 9m^2 + 0m - 16$

$= 9m^2 + 12m - 12m - 16$

$= 3m(3m+4) - 4(3m+4)$

$= (3m+4)(3m-4)$

S 0
P -144
I $12, -12$

Apr 7-6:57 PM

Recall these patterns:

1. Perfect Squares

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

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

2. Difference of Squares

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

Mar 26-8:24 AM

Factor using a Special Pattern:

(a) $25d^2 - 144$

$= (5d + 12)(5d - 12)$

(b) $16x^2 + 24xy + 9y^2$

$= (4x + 3y)^2$

(c) $18p^2q - 60pq + 50q$

$= 2q(9p^2 - 30p + 25)$

$= 2q(3p - 5)^2$

(d) $98a^2 - 32b^2$

$= 2(49a^2 - 16b^2)$

$= 2(7a - 4b)(7a + 4b)$

Mar 26-8:24 AM

Assigned Work:

Handout Section 3.7

~~1~~ 2 - 4, 6, ~~11~~ 12*
(don't forget common factors first)

Mar 26-9:06 AM