

Name \_\_\_\_\_

### Section 2.3

### Algebra II: Square of a Binomial (Trinomial Square)

Essential Question:

What happens when I multiply a binomial by itself?

Examples:

1)  $6^2 = 6 \cdot 6$   
 $= 36$

$x \cdot x = x^2$

$6x^2 = 36x^2$

2)  $(x+3)^2$

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

$x^2 + 6x + 9$

$(x-3)^2$

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

$x^2 - 6x + 9$

$(4x+3)^2$	$4x$	$+3$
$4x$	$16x^2$	$12x$
$+3$	$12x$	$9$

$16x^2 + 24x + 9$

patterns:

- 1) Square first term
- 2) multiply the 2 terms - double it
- 3) Square the last term

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Square of a Binomial.

Multiply using the box method.

1)  $(x + 4)^2$


2)  $(r + 2)^2$


3)  $(x - 2)^2$


Express as a trinomial.

4)  $(y - 3)^2$

5)  $(x + 3)^2$

6)  $(n + 6)^2$

7)  $(x - 4)^2$

8)  $(m + 5)^2$

9)  $(x + 9)^2$

10)  $(y - 8)^2$

11)  $(n - 5)^2$

12)  $(y - 1)^2$

13)  $(4x - 2)^2$

14)  $(3a + 2)^2$

15)  $(3x + y)^2$