

Special Products of Binomials

PF4

Perfect-Square Trinomials:

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

Square a F  
 multiply a·b & double it  
 Square b L  
 0+1

EX:  $(x + 4)^2$

$$x^2 + 8x + 16$$

EX:  $(3x + 10)$

$$9x^2 + 60x + 100$$

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

Square a F  
 mult a·b & double it  
 Square b L  
 0+1

EX:  $(x - 3)^2 = (x - 3)(x - 3)$

$$x^2 - 6x + 9$$

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

$$x^2 - 6x + 9$$

Difference of Two Squares:

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

Square a F  
 Square b L  
 0+1 → zero pair

EX:  $(x + 5)(x - 5)$

$$x^2 - 25$$

$$(x + 5)(x - 5)$$

$$x^2 + 5x - 5x - 25$$

$$x^2 - 25$$