

DEFINITIONS

PERFECT SQUARE TRINOMIAL:

Factors Match

EX. $x^2 + 2x + 1 \longrightarrow (x + 1)(x + 1)$

$$\frac{ac}{b}$$

$$\sqrt{b^2 - 4ac} = \sqrt{2^2 - 4(1)(1)} = \sqrt{0} = 0$$
$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{-2 \pm 0}{2(1)} = \frac{-2}{2} = -1$$
$$\therefore (x + 1)^2$$

SQUARED BINOMIAL

$$(x-2)^2 = \cancel{x^2 - 4} \quad (x-2)^2$$

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

$$x^2 - 2x - 2x + 4$$

$$\hline x^2 - 4x + 4$$

SQUARED BINOMIAL

$$a^2 + 2ab + b^2$$

$$(2y + 7)^2$$

$$(2y + 7)(2y + 7)$$

$$4y^2 + 14y + 14y + 49$$

$$4y^2 + 28y + 49$$

SUM & DIFFERENCE FORMULA

$$(a + b)(a - b)$$



$$a^2 - b^2$$

SUM & DIFFERENCE BINOMIALS

$$(y - 3)(y + 3)$$

$$y^2 + \cancel{3y} - \cancel{3y} - 9 \quad (y+3)(y-3)$$

$$y^2 - 9$$