

CUADRADO DE UN BINOMIO

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

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

$$(a+b)(a+b) = \begin{matrix} a^2 + ab + ba + b^2 \\ a^2 + ab + ab + b^2 \\ \hline a^2 + 2ab + b^2 \end{matrix}$$

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

$$(x-5)^2 = x^2 - 2x5 + 25 = x^2 - 10x + 25 //$$

$$(m-3)^2 = m^2 - 6m + 9 //$$

$$(x+6)^2 =$$

$$(a^2 - b^2)^2 = a^4 - 2a^2b^2 + b^4 \rightarrow \begin{matrix} (a^2)^2 - 2a^2b^2 + (b^2)^2 \\ \hline a^4 - 2a^2b^2 + b^4 \end{matrix}$$

$$(3xy + 5x)^2 = 9x^2y^2 + 30x^2y + 25x^2 //$$

$$(5m - 2)^2 = 25m^2 - 20m + 4 //$$

$$(-5m^2 + 3n^2)^2 = 25m^4 - 30m^2n^2 + 9n^4 //$$

$$\left(\frac{3}{4}x^3 + \frac{2}{3}y^2\right)^2 = \frac{9}{16}x^6 + x^3y^2 + \frac{4}{9}y^4 //$$

$$\begin{aligned} & \left(\frac{3}{4}x^3\right)^2 + 2 \cdot \frac{3}{4}x^3 \cdot \frac{2}{3}y^2 + \left(\frac{2}{3}y^2\right)^2 \\ & \frac{9}{16}x^6 + \frac{12}{12}x^3y^2 + \frac{4}{9}y^4 \\ & \frac{9}{16}x^6 + x^3y^2 + \frac{4}{9}y^4 // \end{aligned}$$

Binomio Conjugado

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

$$(5x+3)(5x-3) = (5x)^2 - 3^2 = 25x^2 - 9 //$$

$$(3m-2n^2)(3m+2n^2) = 9m^2 - 4n^4$$

$$(\sqrt{2} + \sqrt{3})(\sqrt{2} - \sqrt{3}) = (\sqrt{2})^2 - (\sqrt{3})^2$$

$$(a+b)(a-b) = a^2 - b^2 = 2 - 3 = -1$$

$$\begin{aligned} (3\sqrt{6} + 2\sqrt{3})(3\sqrt{6} - 2\sqrt{3}) &= 12 - \textcircled{42} \\ &= (3\sqrt{6})^2 - (2\sqrt{3})^2 \\ &= 9 \cdot 6 - 4 \cdot 3 \\ &= 54 - 12 \rightarrow 42 // \end{aligned}$$

Binomio con Término Común

$$(x+a)(x+b) = x^2 + \underline{(a+b)}x + ab$$

$$\begin{aligned} (x+2)(x+3) &= x^2 + (2+3)x + 2 \cdot 3 \rightarrow x^2 + 5x + 6 // \\ &\quad x^2 + 2x + 3x + 6 \\ &\quad x^2 + 5x + 6 // \end{aligned}$$

$$(b+4)(b+6) = b^2 + 10b + 24 //$$

$$\begin{aligned} (2x-2)(2x-4) &= \widehat{(2x)^2} - (6 \cdot 2)x + 2 \cdot 4 \quad \begin{matrix} (-)(-) \\ (+)(+) \end{matrix} \\ &\quad 4x^2 - (12)x + 8 \\ &\quad 4x^2 - 12x + 8 // \end{aligned}$$

$$\begin{aligned} (a-5)(3+a) &= a^2 - 8a - 15 \\ (a-5)(a+3) &\quad a^2 - 2a - 15 // \end{aligned} \quad \begin{aligned} &a^2 - (5+3)a - 5 \cdot 3 \\ &a^2 - 2a - 15 // \\ &a^2 + 2a - 15 \\ &\quad a^2 - 2a - 15 \end{aligned}$$

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

$$\begin{aligned} &a^2 - (5+3)a + (-5 \cdot 3) \\ &a^2 \textcircled{-} 2a \textcircled{+} (-15) \end{aligned}$$

$$(a+3)(a-5)$$

$$\begin{aligned} &a^2 \textcircled{+} 2a - 15 \rightarrow \\ &\quad \textcircled{-} 2a \textcircled{+} 2a \end{aligned}$$

$$\begin{aligned} &(a-5)(a+3) \\ &(a+3)(a-5)x \end{aligned}$$

TRIÂNGULO AC CORDADO

$$(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2ac + 2bc$$

$$(x+y+z)^2 = (x+y+z) \cdot (x+y+z)$$

$$x^2 + xy + xz + xy + y^2 + yz + xz + yz + z^2$$

$$x^2 + 2xy + 2xz + y^2 + 2yz + z^2$$

$$x^2 + y^2 + z^2 + 2xy + 2yz + 2xz //$$

$$(x+y+z)^2 = x^2 + y^2 + z^2 + 2xy + 2xz + 2yz //$$

$$(x+y+3)^2 = x^2 + y^2 + 9 + 2xy + 6x + 6y //$$

$$(2m+3n+5)^2 = 4m^2 + 9n^2 + 25 + 12mn + 6m + 30n$$

$$(5a^2+3b^3-a)^2 = 25a^4 + 9b^6 + 30a^2b^3 + 6a^5 - 10a^3 - 6ab^3$$

$$25a^4 + 9b^6 + a^2 + 30a^2b^3 - 6ab^3 - 10a^3 //$$

CUBO DE UM TRIÂNGULO

$$(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$$

$$(a-b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$$

$$\left(\frac{x}{a} + \frac{5}{b}\right)^3 = x^3 + 3x^2 \cdot \frac{5}{b} + 3x \left(\frac{5}{b}\right)^2 + \left(\frac{5}{b}\right)^3$$
$$x^3 + 15x^2 + 75x + 125 //$$

$$(3-m)^3 = 27 - 27m + 9m^2 - m^3$$

$$(x+1)^3 = x^3 + 3x^2 + 3x + 1 //$$

TAREA

$$* (5m-2)^2$$

$$* (3x^3-2y^2)^2$$

$$* \left(\frac{5}{6}m^3n - 9mn^3\right)^2$$

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

$$* (5-\sqrt{2})(5+\sqrt{2})$$

$$* (m+3)(m-5)$$

$$* (x+2)(x+3)$$

$$* (x^2+3)(x^2-2)$$

$$* (m+n^2+4)^2$$

$$* (5a^3-4b^3+a^2b^2)^2$$

$$* (3x+2y-xy)^3$$

$$* (8x-2)^3$$

$$* (6a+10b)^3$$

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

JUEVE 14/12/23
23:59 PM