

Binomio elevado a la décima quinta potencia

$$(x + y)^1 \text{ expand } \rightarrow x + y$$

$$(x + y)^2 \text{ expand } \rightarrow x^2 + 2 x y + y^2$$

$$(x + y)^3 \text{ expand } \rightarrow x^3 + 3 x^2 y + 3 x y^2 + y^3$$

$$(x + y)^4 \text{ expand } \rightarrow x^4 + 4 x^3 y + 6 x^2 y^2 + 4 x y^3 + y^4$$

$$(x + y)^5 \text{ expand } \rightarrow x^5 + 5 x^4 y + 10 x^3 y^2 + 10 x^2 y^3 + 5 x y^4 + y^5$$

$$(x + y)^6 \text{ expand } \rightarrow x^6 + 6 x^5 y + 15 x^4 y^2 + 20 x^3 y^3 + 15 x^2 y^4 + 6 x y^5 + y^6$$

$$(x + y)^7 \text{ expand } \rightarrow x^7 + 7 x^6 y + 21 x^5 y^2 + 35 x^4 y^3 + 35 x^3 y^4 + 21 x^2 y^5 + 7 x y^6 + y^7$$

$$(x + y)^8 \text{ expand } \rightarrow x^8 + 8 x^7 y + 28 x^6 y^2 + 56 x^5 y^3 + 70 x^4 y^4 + 56 x^3 y^5 + 28 x^2 y^6 + 8 x y^7 + y^8$$

$$(x + y)^9 \text{ expand } \rightarrow x^9 + 9 x^8 y + 36 x^7 y^2 + 84 x^6 y^3 + 126 x^5 y^4 + 126 x^4 y^5 + 84 x^3 y^6 + 36 x^2 y^7 + 9 x y^8 + y^9$$

$$(x + y)^{10} \text{ expand } \rightarrow x^{10} + 10 x^9 y + 45 x^8 y^2 + 120 x^7 y^3 + 210 x^6 y^4 + 252 x^5 y^5 + 210 x^4 y^6 + 120 x^3 y^7 + 45 x^2 y^8 + 10 x y^9 + y^{10}$$

$$(x + y)^{11} \text{ expand } \rightarrow x^{11} + 11 x^{10} y + 55 x^9 y^2 + 165 x^8 y^3 + 330 x^7 y^4 + 462 x^6 y^5 + 462 x^5 y^6 + 330 x^4 y^7 + 165 x^3 y^8 + 55 x^2 y^9 + 11 x y^{10} + y^{11}$$

$$(x + y)^{12} \text{ expand } \rightarrow x^{12} + 12 x^{11} y + 66 x^{10} y^2 + 220 x^9 y^3 + 495 x^8 y^4 + 792 x^7 y^5 + 924 x^6 y^6 + 792 x^5 y^7 + 495 x^4 y^8 + 220 x^3 y^9 + 66 x^2 y^{10} + 12 x y^{11} + y^{12}$$

$$(x + y)^{13} \text{ expand } \rightarrow x^{13} + 13 x^{12} y + 78 x^{11} y^2 + 286 x^{10} y^3 + 715 x^9 y^4 + 1287 x^8 y^5 + 1716 x^7 y^6 + 1716 x^6 y^7 + 1287 x^5 y^8 + 715 x^4 y^9 + 286 x^3 y^{10} + 78 x^2 y^{11} + 13 x y^{12} + y^{13}$$

$$(x + y)^{14} \text{ expand } \rightarrow x^{14} + 14 x^{13} y + 91 x^{12} y^2 + 364 x^{11} y^3 + 1001 x^{10} y^4 + 2002 x^9 y^5 + 3003 x^8 y^6 + 3432 x^7 y^7 + 3003 x^6 y^8 + 2002 x^5 y^9 + 1001 x^4 y^{10} + 364 x^3 y^{11} + 91 x^2 y^{12} + 14 x y^{13} + y^{14}$$

$$(x + y)^{15} \text{ expand } \rightarrow x^{15} + 15 x^{14} y + 105 x^{13} y^2 + 455 x^{12} y^3 + 1365 x^{11} y^4 + 3003 x^{10} y^5 + 5005 x^9 y^6 + 6435 x^8 y^7 + 6435 x^7 y^8 + 5005 x^6 y^9 + 3003 x^5 y^{10} + 1365 x^4 y^{11} + 455 x^3 y^{12} + 105 x^2 y^{13} + 15 x y^{14} + y^{15}$$