
Contents

Expression for binomial expansion of $(a - x)$ raised to the power n	2
Expression for binomial expansion of $(1 + x)$ raised to the power n	2
Expression for binomial expansion of $(1 + x)$ raised to the power n in terms of combination	2
Expression for binomial expansion of $(1 - x)$ raised to the power n	2
Expression for binomial expansion of $(1 - x)$ raised to the power n in terms of combination	2

Expression for binomial expansion of (a - x) raised to the power n

$$(a - x)^n = C(n, 0)a^n - C(n, 1)a^{n-1}x + \dots + (-1)^n C(n, n)x^n$$

Expression for binomial expansion of (1 + x) raised to the power n

$$(1+x)^n = 1 + nx + \frac{n(n-1)}{2!}x^2 + \frac{n(n-1)(n-2)}{3!}x^3 + \dots + \frac{n(n-1)(n-2)\dots(n-r-1)}{r!}x^r + x^n$$

Expression for binomial expansion of (1 + x) raised to the power n in terms of combination

$$(1+x)^n = C(n, 0) + C(n, 1)x + C(n, 2)x^2 + \dots + C(n, n)x^n$$

Expression for binomial expansion of (1 - x) raised to the power n

$$(1-x)^n = 1 - nx + \frac{n(n-1)}{2!}x^2 - \frac{n(n-1)(n-2)}{3!}x^3 + \dots + (-1)^n x^n$$

Expression for binomial expansion of (1 - x) raised to the power n in terms of combination

$$(1-x)^n = C(n, 0) - C(n, 1)x + C(n, 2)x^2 - \dots + (-1)^n C(n, n)x^n$$