



Binomial Theorem - Polynomial with Variable, Theorem and Power to Binomial

Notation

1 Find the term containing n^1 in the expansion of this expression.

$$(n + t)^4$$

$$(n + t)^4 = \sum_{k=0}^4 \binom{4}{k} n^{4-k} t^k$$

- A $\binom{4}{4} n^0 t^4$ B $\binom{4}{3} n^1 t^3$ C $\binom{3}{4} n^1 t^3$ D $\binom{4}{3} n^3 t^1$

2 Find the term containing t^4 in the expansion of this expression.

$$(t + n)^5$$

$$(t + n)^5 = \sum_{k=0}^5 \binom{5}{k} t^{5-k} n^k$$

- A $\binom{5}{2} t^3 n^2$ B $\binom{1}{5} t^4 n^1$ C $\binom{5}{1} t^1 n^4$ D $\binom{5}{1} t^4 n^1$

3 Find the term containing n^2 in the expansion of this expression.

$$(n + y)^5$$

$$(n + y)^5 = \sum_{k=0}^5 \binom{5}{k} n^{5-k} y^k$$

- A $\binom{5}{4} n^1 y^4$ B $\binom{3}{5} n^2 y^3$ C $\binom{5}{3} n^3 y^2$ D $\binom{5}{3} n^2 y^3$

4 Find the term containing x^3 in the expansion of this expression.

$$(x + w)^5$$

$$(x + w)^5 = \sum_{k=0}^5 \binom{5}{k} x^{5-k} w^k$$

- A $\binom{5}{2} x^3 w^2$ B $\binom{5}{3} x^2 w^3$ C $\binom{2}{5} x^3 w^2$ D $\binom{5}{2} x^2 w^3$

5 Find the term containing w^3 in the expansion of this expression.

$$(w + m)^4$$

$$(w + m)^4 = \sum_{k=0}^4 \binom{4}{k} w^{4-k} m^k$$

- A $\binom{1}{4} w^3 m^1$ B $\binom{4}{1} w^3 m^1$ C $\binom{4}{2} w^2 m^2$ D $\binom{4}{1} w^1 m^3$

6 Find the term containing t^2 in the expansion of this expression.

$$(t + q)^3$$

$$(t + q)^3 = \sum_{k=0}^3 \binom{3}{k} t^{3-k} q^k$$

- A $\binom{1}{3} t^2 q^1$ B $\binom{3}{2} t^1 q^2$ C $\binom{3}{1} t^2 q^1$ D $\binom{3}{1} t^1 q^2$

7 Find the term containing z^2 in the expansion of this expression.

$$(z + x)^4$$

$$(z + x)^4 = \sum_{k=0}^4 \binom{4}{k} z^{4-k} x^k$$

- A $\binom{2}{4} z^2 x^2$ B $\binom{4}{2} z^2 x^2$ C $\binom{4}{3} z^1 x^3$