



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

Notation and Value

1 Find the term containing p^2 in the expansion of this expression.

$$(p + 3)^4$$

$$(p + 3)^4 = \sum_{k=0}^4 \binom{4}{k} p^{4-k} 3^k$$

A $\binom{4}{2} p^2 \cdot 9$

B $\binom{4}{2} p^2 \cdot 6$

C $\binom{4}{3} p^1 \cdot 27$

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

$$(x + 3)^5$$

$$(x + 3)^5 = \sum_{k=0}^5 \binom{5}{k} x^{5-k} 3^k$$

A $\binom{5}{4} x^1 \cdot 81$

B $\binom{5}{4} x^1 \cdot 12$

C $\binom{5}{5} x^0 \cdot 243$

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

$$(z + 3)^3$$

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

A $\binom{3}{2} z^1 \cdot 6$

B $\binom{3}{2} z^1 \cdot 9$

C $\binom{3}{3} z^0 \cdot 27$

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

$$(z - 3)^3$$

$$(z - 3)^3 = \sum_{k=0}^3 \binom{3}{k} z^{3-k} (-3)^k$$

A $\binom{3}{1} z^2 \cdot -3$

B $\binom{3}{2} z^1 \cdot 9$

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

$$(r - 3)^5$$

$$(r - 3)^5 = \sum_{k=0}^5 \binom{5}{k} r^{5-k} (-3)^k$$

A $\binom{5}{2} r^3 \cdot 9$

B $\binom{5}{3} r^2 \cdot -27$

C $\binom{5}{2} r^3 \cdot -6$

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

$$(x + 2)^5$$

$$(x + 2)^5 = \sum_{k=0}^5 \binom{5}{k} x^{5-k} 2^k$$

A $\binom{5}{4} x^1 \cdot 16$

B $\binom{5}{3} x^2 \cdot 8$

C $\binom{5}{3} x^2 \cdot 6$

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

$$(x - 3)^4$$

$$(x - 3)^4 = \sum_{k=0}^4 \binom{4}{k} x^{4-k} (-3)^k$$

A $\binom{4}{3} x^1 \cdot -9$

B $\binom{4}{3} x^1 \cdot -27$

C $\binom{4}{4} x^0 \cdot 81$

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

$$(p - 2)^3$$

$$(p - 2)^3 = \sum_{k=0}^3 \binom{3}{k} p^{3-k} (-2)^k$$

A $\binom{3}{3} p^0 \cdot -8$

B $\binom{3}{2} p^1 \cdot 4$