

THE BINOMIAL THEOREM:

8 Multiple choice questions

1. What is the 4th term of $(x+2y)^{10}$?

- A formula for finding any power of a binomial without multiplying at length.
- $960x^7y^3$
- $12xy^5$
- $x^3+3x^2y+3xy^2+y^3$

2. What is the expansion of $(x+y)^3$?

- $x^3+3x^2y+3xy^2+y^3$
- $960x^7y^3$
- $12xy^5$
- A formula for finding any power of a binomial without multiplying at length.

3. What are the coefficients of the row on Pascal's triangle for the expansion of $(a+b)$ raised to the 9th power?

- A formula for finding any power of a binomial without multiplying at length.
- $x^3+3x^2y+3xy^2+y^3$
- $960x^7y^3$
- 1, 9, 36, 84, 126, 126, 84, 36, 9, 1

4. How do you find the next row in the Pascal's Triangle?

- Addition. Each number is the number directly above it added together.
- 1, 9, 36, 84, 126, 126, 84, 36, 9, 1
- $x^3 + 3x^2y + 3xy^2 + y^3$
- A formula for finding any power of a binomial without multiplying at length.

5. What is the 6th term of $(2x+y)^6$?

- $12xy^5$
- $960x^7y^3$
- A formula for finding any power of a binomial without multiplying at length.
- $x^3 + 3x^2y + 3xy^2 + y^3$

6. What is the Binomial Theorem?

- $960x^7y^3$
- $x^3 + 3x^2y + 3xy^2 + y^3$
- $12xy^5$
- A formula for finding any power of a binomial without multiplying at length.

7. Expand $(a-b)^5$

- Addition. Each number is the number directly above it added together.
- $x^3 + 3x^2y + 3xy^2 + y^3$

$$a^5 - 5a^4b + 10a^3b^2 - 10a^2b^3 + 6ab^4 - b^5$$

Powers of a decrease

- Powers of b increase

Coefficients are 1, 5, 10, 10, 5, 1 from 5th row of Pascal's triangle

-b makes the odd powers of b negative

- A formula for finding any power of a binomial without multiplying at length.

8. What is the Binomial Coefficient formula?

- A formula for finding any power of a binomial without multiplying at length.
-
- $12xy^5$
- $960x^7y^3$