BINOMIAL THEOREM - PRACTICE TEST | NEW BRUNSWICK FOUNDATIONS OF MATHEMATICS 120 · UNIT D · 25 QUESTIONS

# Binomial Theorem — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

**1** The term containing $x^1$ in the expansion of $(x + 1)^5$ has coefficient

- A 5
- B 6
- C 4
- D 10

Understand It with Pulse | Flag a mistake

**2** The term containing $x^4$ in the expansion of $(x + 1)^6$ has coefficient

- A 16
- B 15
- C 14
- D 30

Understand It with Pulse | Flag a mistake

**3** The term containing $x^5$ in the expansion of $(x + 1)^7$ has coefficient

- A 22
- B 20
- C 21
- D 42

Understand It with Pulse | Flag a mistake

**4** The expansion of $(a + b)^5$ has this many terms

ANSWER _____

Understand It with Pulse | Flag a mistake

**5** The coefficient of the term with $x^3$ in the expansion of $(x + 1)^9$ is

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The coefficient of the term with $x^5$ in the expansion of $( x + 1 )^{10}$ is**

ANSWER

Understand It with Pulse | Flag a mistake

7 **The coefficient of the term with $x^2$ in the expansion of $( x + 1 )^6$ is**

ANSWER

Understand It with Pulse | Flag a mistake

8 **The number of terms in $(x + y)^10$ is**

ANSWER

Understand It with Pulse | Flag a mistake

9 **The number of terms in the expansion of $( a + b )^4$ is**

ANSWER

Understand It with Pulse | Flag a mistake

10 **The number of terms in the expansion of $( a + b )^5$ is**

ANSWER

Understand It with Pulse | Flag a mistake

11 **The number of terms in the expansion of $( a + b )^6$ is**

ANSWER

Understand It with Pulse | Flag a mistake

12 **In the expansion of $(a + b)^4$ , the number of terms is**

ANSWER

Understand It with Pulse | Flag a mistake

13 **The term $x^2 y$ in $(x + y)^3$ has coefficient**

ANSWER

Understand It with Pulse | Flag a mistake

14 **In $(x + 1)^5$ , the $x^3$ term has coefficient**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **In the expansion of $( x + y )^4$ , the coefficient of $x^3y^1$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **In the expansion of $( x + y )^5$ , the coefficient of $x^3y^2$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **In the expansion of $( x + y )^6$ , the coefficient of $x^4y^2$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **In $(2x + y)^2$ , the coefficient of xy is**

ANSWER

Understand It with Pulse | Flag a mistake

19 **The sum of the coefficients in $(x + y)^2$ is**

ANSWER

Understand It with Pulse | Flag a mistake

20 **Setting x = 1 and y = 1 in $(x + y)^3$ gives the sum of its coefficients, which is**

ANSWER

Understand It with Pulse | Flag a mistake

21 **The sum of the coefficients in the expansion of $( x + y )^3$ is**

ANSWER

Understand It with Pulse | Flag a mistake

22 **The sum of the coefficients in the expansion of $( x + y )^4$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **The sum of the coefficients in the expansion of $( x + y )^5$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **In the expansion of $(x + 2)^3$ , the term containing $x^2$ has coefficient**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **The coefficient of the x term in the expansion of $(x + 3)^2$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

# ANSWER KEY

| | | | | | |
|---|---|---|---|---|---|
| **1.** | A | **10.** | 6 | **19.** | 4 |
| **2.** | B | **11.** | 7 | **20.** | 8 |
| **3.** | C | **12.** | 5 | **21.** | 8 |
| **4.** | 6 | **13.** | 3 | **22.** | 16 |
| **5.** | 84 | **14.** | 10 | **23.** | 32 |
| **6.** | 252 | **15.** | 4 | **24.** | 6 |
| **7.** | 15 | **16.** | 10 | **25.** | 6 |
| **8.** | 11 | **17.** | 15 | | |
| **9.** | 5 | **18.** | 4 | | |

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