120 · NEW BRUNSWICK

120
Practice Test

Unit C: Probability and Counting: Fundamental Counting Principle, Permutations, and Combinations

25 Questions

Original practice test based on the New Brunswick curriculum. Work through each question, then check your answers at the end.

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.

© 2026 Brett Robbins. All Rights Reserved.



Question 1

The number of ways to arrange 2 marbles chosen from 5 different marbles is

Understand It with Pulse Flag a mistake

Question 2

The number of permutations of 6 objects taken 2 at a time is

Understand It with Pulse Flag a mistake

Question 3

The number of permutations of 7 objects taken 3 at a time is

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 4

Seven people are in a line for a photo. The number of ways to choose and order 3 of them for the front row is

Understand It with Pulse Flag a mistake

Question 5

A licence plate uses 2 different letters followed by 1 digit. The number of possible plates is

Understand It with Pulse Flag a mistake

Question 6

The letters of the word CAT are arranged in all possible orders. The number of arrangements is

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.



Question 7

Four books are chosen from 8 and placed in order on a shelf. The number of possible orders is

Understand It with Pulse | Flag a mistake

Question 8

A race has 10 runners. The number of ways the gold, silver and bronze medals can be awarded is

Understand It with Pulse | Flag a mistake

Question 9

The number of combinations of 5 objects taken 2 at a time is

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.



Question 10

The number of ways to choose 2 playing cards from 6 different cards is

Understand It with Pulse Flag a mistake

Question 11

The number of combinations of 7 objects taken 3 at a time is

Understand It with Pulse Flag a mistake

Question 12

A team of 4 is selected from 9 players. The number of different teams is

Understand It with Pulse Flag a mistake

Question 13

A menu offers 8 dishes and a diner picks any 3. The number of different choices is

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 14

From a group of 12 students, a pair is chosen to present. The number of different pairs is

Understand It with Pulse Flag a mistake



Question 15

A lottery ticket chooses 5 numbers from 1 to 40. The number of different tickets is

Understand It with Pulse Flag a mistake

Question 16

Choosing 2 toppings from 7 is counted with combinations because the order of the toppings

A) does not matter

B) matters

C) is alphabetical

D) is by price

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 17

The number of ways to arrange 3 different books in a row is

Understand It with Pulse Flag a mistake

Question 18

The number of ways to arrange 4 different books in a row is

Understand It with Pulse Flag a mistake

Question 19

The number of ways to arrange 5 different books in a row is

Understand It with Pulse Flag a mistake



Question 20

Eight different books are placed in a row on a shelf. The number of possible orders is

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 21

Six students stand in a line. The number of possible lines is

Understand It with Pulse Flag a mistake

Question 22

The letters A, B, C, D are arranged in a row. The number of arrangements with A first is

Understand It with Pulse Flag a mistake

Question 23

An outfit is chosen from 3 shirts and 4 pairs of pants. The number of different outfits is

Understand It with Pulse Flag a mistake

Question 24

An outfit is chosen from 2 shirts and 5 pairs of pants. The number of different outfits is

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.



Question 25

An outfit is chosen from 4 shirts and 3 pairs of pants. The number of different outfits is

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

ANSWER KEY

1. 20
2. 30
3. 210
4. 210
5. 6500
6. 6
7. 1680
8. 720
9. 10
10. 15
11. 35
12. 126
13. 56
14. 66
15. 658008
16. A
17. 6
18. 24
19. 120
20. 40320
21. 720
22. 6
23. 12
24. 10
25. 12

© 2026 Brett Robbins. All Rights Reserved.