NOVA SCOTIA MATHEMATICS 12 · UNIT C

Counting Methods and Probability — Practice Test

Nova Scotia Mathematics 12 • 25 questions

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 **Find the number of combinations when choosing 2 items from 5 different items, order not mattering.**

ANSWER _____

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2 **Find the number of combinations when choosing 2 items from 6 different items, order not mattering.**

ANSWER _____

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3 **Find the number of combinations when choosing 3 items from 7 different items, order not mattering.**

ANSWER _____

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4 **Find the number of combinations when choosing 2 items from 8 different items, order not mattering.**

ANSWER _____

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5 **Find the number of combinations when choosing 3 items from 5 different items, order not mattering.**

ANSWER _____

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6 **Find the number of combinations when choosing 2 items from 9 different items, order not mattering.**

ANSWER _____

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7 **Find the number of combinations when choosing 3 items from 6 different items, order not mattering.**

ANSWER _____

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8 **Find the number of combinations when choosing 2 items from 10 different items, order not mattering.**

ANSWER _____

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9 **Find the number of combinations when choosing 2 items from 7 different items, order not mattering.**

ANSWER _____

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10 **Find the number of combinations when choosing 3 items from 8 different items, order not mattering.**

ANSWER _____

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11 **Find the number of combinations when choosing 2 items from 4 different items, order not mattering.**

ANSWER _____

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12 **Find the number of combinations when choosing 3 items from 9 different items, order not mattering.**

ANSWER _____

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13 **Find the number of combinations when choosing 4 items from 6 different items, order not mattering.**

ANSWER _____

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14 **Find the number of combinations when choosing 3 items from 10 different items, order not mattering.**

ANSWER _____

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15 **The fundamental counting principle says total outcomes equal**

- A the product of the numbers of choices at each stage
- B the sum of the numbers of choices at each stage
- C the largest number of choices
- D the smallest number of choices

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16 **A permutation is an arrangement where**

- A order does not matter
- B order matters
- C repetition is required
- D only two items are used

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17 **A combination is a selection where**

A order matters

B repetition is required

C order does not matter

D only one item is used

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18 **The number of permutations of n different items is**

A n^2

B 2^n

C n + 1

D n!

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19 **Probability is a number between**

- A 0 and 1 inclusive
- B 0 and 100 only
- C -1 and 1
- D 1 and 2

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20 **The probability of an event plus the probability of its complement equals**

- A 0
- B 1
- C 2
- D the number of outcomes

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21 **Two events are independent if the outcome of one**

- A always matches the other
- B is the opposite of the other
- C does not affect the other
- D depends on the first

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22 **The probability of two independent events both occurring is**

- A the sum of their probabilities
- B the larger probability
- C the smaller probability
- D the product of their probabilities

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23 **The probability of either of two mutually exclusive events is**

- A the sum of their probabilities
- B the product of their probabilities
- C zero
- D 1

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24 **An outcome with probability 0 is**

- A certain
- B impossible
- C likely
- D rare but possible

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25 **An outcome with probability 1 is**

A impossible

B unlikely

C certain

D even chance

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ANSWER KEY

1.	10	**10.**	56	**19.**	A
2.	15	**11.**	6	**20.**	B
3.	35	**12.**	84	**21.**	C
4.	28	**13.**	15	**22.**	D
5.	10	**14.**	120	**23.**	A
6.	36	**15.**	A	**24.**	B
7.	20	**16.**	B	**25.**	C
8.	45	**17.**	C		
9.	21	**18.**	D		

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