Probability and Combinatorics — Practice Test

Prince Edward Island Foundations of 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 **The number of combinations of 3 items chosen from 8 distinct items is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **The number of permutations of 3 items chosen from 7 distinct items is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A bag holds 4 green balls and 6 yellow balls. The probability of drawing a green ball as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A bag holds 2 red and 8 white counters. The probability of drawing a red counter as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A bag holds 3 red marbles and 7 blue marbles. The probability of drawing a red marble as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A deck has 52 cards. The probability of drawing an ace as a decimal, rounded to four decimal places, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A fair coin is tossed three times. The probability of three heads as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **A fair coin is tossed twice. The probability of two heads as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A fair die is rolled once. The probability of rolling a 5 as a decimal, rounded to four decimal places, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A fair die is rolled once. The probability of rolling a number greater than 4 as a decimal, rounded to four decimal places, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **A sample space lists**

- A only favourable outcomes
- B only likely outcomes
- C the experimental results
- D all possible outcomes

Understand It with Pulse | Flag a mistake

12 **A spinner has 5 equal sections. The probability of landing on a given section as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A standard die is rolled once. The probability of rolling an even number as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **Odds in favour compare**

A trials to successes

B samples to populations

C favourable outcomes to unfavourable outcomes

D total outcomes to favourable outcomes

Understand It with Pulse | Flag a mistake

15 **Order does not matter in a**

A permutation

B arrangement

C sequence

D combination

Understand It with Pulse | Flag a mistake

16 **Order matters in a**

A permutation

B combination

C sample space

D mutually exclusive event

Understand It with Pulse | Flag a mistake

17 **The fundamental counting principle says to**

A multiply the numbers of choices

B add the numbers of choices

C divide the total by two

D subtract repeated choices

Understand It with Pulse | Flag a mistake

18 **The number of ways to arrange 5 distinct books on a shelf is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **The number of ways to arrange 4 distinct letters in a row is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **The number of ways to choose 2 captains from 9 players, where order does not matter, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

- A 1
- B 0
- C 2
- D one half

Understand It with Pulse | Flag a mistake

22 **The number of combinations of 2 items chosen from 10 distinct items is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **The number of permutations of 2 items chosen from 8 distinct items is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **The number of combinations of 4 items chosen from 7 distinct items is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **The number of permutations of 3 items chosen from 6 distinct items is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	56	**10.**	0.3333	**19.**	24
2.	210	**11.**	D	**20.**	36
3.	0.4	**12.**	0.2	**21.**	A
4.	0.2	**13.**	0.5	**22.**	45
5.	0.3	**14.**	C	**23.**	56
6.	0.0769	**15.**	D	**24.**	35
7.	0.125	**16.**	A	**25.**	120
8.	0.25	**17.**	A		
9.	0.1667	**18.**	120		

© 2026 Brett Robbins. All Rights Reserved.