ALBERTA MATH 30-1 · 10 QUESTIONS

Permutations, Combinations & 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 **Nine people are seated around a circular table. The number of different seating arrangements is**

- A 362880
- B 40320
- C 5040
- D 20160

Understand It with Pulse | Flag a mistake

2 **A committee of 6 is to be chosen from 8 juniors and 6 seniors. The number of committees that contain at least one senior is**

A 3003

B 2775

C 2925

D 2975

Understand It with Pulse | Flag a mistake

3 **Six students stand in a line for a photo. Two of the students, Mia and Noah, must not stand next to each other. The number of different arrangements is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 In the expansion of $(3x - 1)^5$, the coefficient of the x^3 term is

- A 270
- B -270
- C 90
- D 810

Understand It with Pulse | Flag a mistake

5 If ${}_nP_2 = 42$, then the value of n is

- A 6
- B 8
- C 7
- D 42

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6 **A chess club has 7 experienced players and 5 novice players. A team of 5 players is chosen with more experienced players than novice players. The number of different teams is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **Four couples attend a movie and sit in a row of 8 seats, with each couple sitting together. The number of different seating arrangements is**

A 192

B 384

C 768

D 40320

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8 **The sum of the coefficients of the terms in the expansion of $(3x - 2)^5$ is**

A 3125

B -32

C 25

D 1

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9 **On a grid, a path from point A to point B requires 5 moves right and 4 moves up, moving only right or up. The number of paths from A to B that pass through a point P located 2 moves right and 1 move up from A is**

A 60

B 126

C 66

D 20

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10 **In the expansion of $(x + k)^5$, written in descending powers of x, the coefficient of the x^3 term is 160. The positive value of k is _____**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	B	**5.**	C	**9.**	A
2.	D	**6.**	546	**10.**	4
3.	480	**7.**	B		
4.	A	**8.**	D		

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