NOVA SCOTIA PRE-CALCULUS 12 · UNIT E · 10 QUESTIONS

Exponential and Logarithmic Functions, Permutations, Combinations and the 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 **Find the number of permutations when arranging 4 items chosen from 10 different items, order mattering.**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **Find the number of permutations when arranging 2 items chosen from 12 different items, order mattering.**

ANSWER _____

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3 **Find the number of permutations when arranging 3 items chosen from 13 different items, order mattering.**

ANSWER _____

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4 **If log x = 2 and log y = 3, what is log(xy)?**

- **A** 5
- **B** 6
- **C** -1
- **D** $\frac{2}{3}$

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5 **The power rule for logs says log of x^n equals**

- **A** xlog n
- **B** nlog x
- **C** log $\frac{x}{n}$
- **D** n / log x

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6 **A permutation problem cares about**

A colour only

B size only

C order

D repetition only

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7 **A combination problem ignores**

A the items chosen

B the total count

C repetition

D order

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8 **The coefficient of the second term in $(a + b)^n$ is**

- A n
- B 1
- C n + 1
- D n^2

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9 **Pascal triangle gives**

- A permutation counts only
- B binomial coefficients
- C log values
- D trig values

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10 **An exponential equation such as $2^x = 32$ is solved by**

- A adding exponents
- B multiplying bases
- C writing both sides with the same base
- D taking a square root

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ANSWER KEY

1. 5040
2. 132
3. 1716
4. A
5. B
6. C
7. D
8. A
9. B
10. C

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