How can I use the PERMUT function in Excel to calculate the number of possible permutations for a given set of objects?

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The PERMUT function in Excel is a useful tool for determining the number of possible permutations for a given set of objects. It is a mathematical function that calculates the number of ways in which a set of objects can be arranged in a specific order. This function takes two arguments - the number of objects and the group size - and returns the total number of possible permutations. By using the PERMUT function, users can quickly and accurately calculate the total number of arrangements for a given set of objects, making it a valuable tool for various mathematical and statistical analyses.

This article describes the formula syntax and usage of the **PERMUT** function in Microsoft Excel.

Description

Returns the number of permutations for a given number of objects that can be selected from number objects. A permutation is any set or subset of objects or events where internal order is significant. Permutations are different from combinations, for which the internal order is not significant. Use this function for lottery-style probability calculations.

Syntax

PERMUT(number, number_chosen)

The PERMUT function syntax has the following arguments:

Number Required. An integer that describes the number of objects.

Number_chosen Required. An integer that describes the number of objects in each permutation.

Remarks

Both arguments are truncated to integers.

If number or number_chosen is nonnumeric, PERMUT returns the #VALUE! error value.

If number ≤ 0 or if number_chosen < 0, PERMUT returns the #NUM! error value.

If number < number_chosen, PERMUT returns the #NUM! error value.

The equation for the number of permutations is:

$$P_{k,n} = \frac{n!}{(n-k)!}$$