How can I use the PERMUTATIONA function in Excel to calculate the number of permutations for a given set of items?

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The PERMUTATIONA function in Excel is a useful tool for calculating the number of possible permutations for a given set of items. This function takes two arguments: the number of items in the set and the number of items to be selected. It then returns the total number of possible permutations for that selection. This can be helpful in various scenarios such as determining the number of possible combinations for a password or the number of seating arrangements for a set number of guests. By using the PERMUTATIONA function, you can efficiently and accurately calculate the number of permutations for a given set of items in Excel.

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

Description

Returns the number of permutations for a given number of objects (with repetitions) that can be selected from the total objects.

Syntax

PERMUTATIONA(number, number-chosen)

The PERMUTATIONA function syntax has the following arguments:

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

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

PERMUTATIONA uses the following equation:

$$PERMUTATIONA = Total^{Chosen}$$

Remarks

Both arguments are truncated to integers.

If numeric arguments are values that are not valid, for example, when the total number is zero (0) and the chosen number is larger than zero (0), PERMUTATIONA returns the #NUM! error value.

If numeric arguments use data types that are nonnumeric, PERMUTATIONA returns the #VALUE!

error value.