

# How can I use the PERMUTATIONA function in Google Sheets to calculate the number of permutations for a given set of objects?

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June 30, 2024

## RECOMMENDED CITATION

stats writer (2024). *How can I use the PERMUTATIONA function in Google Sheets to calculate the number of permutations for a given set of objects?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=162911>

The PERMUTATIONA function in Google Sheets is a powerful tool that allows users to calculate the number of possible permutations for a given set of objects. This function takes in two inputs - the total number of objects and the number of objects to be selected for each permutation - and calculates the number of unique arrangements that can be made. It is useful for solving various mathematical and statistical problems, such as determining the number of possible outcomes in a lottery or calculating the number of different combinations in a data set. By using the PERMUTATIONA function, users can easily and accurately calculate the number of permutations without having to manually list out all the possible combinations.

## PERMUTATIONA function

The PERMUTATIONA function returns the number of permutations for selecting a group of objects (with replacement) from a total number of objects. Mathematically, it is equivalent to raising the total number of objects to the number of objects being chosen.

### Parts of a PERMUTATIONA function

PERMUTATIONA(number, number\_chosen)

Part	Description
number	Required. The total number of objects to choose from.
number_chosen	Required. The number of objects to choose from number. Must be less than or equal to number.

### Notes

Both arguments are truncated to integers. If the number is zero, PERMUTATIONA returns a #NUM.

### Examples

Result for A1=PERMUTATIONA(3, 2), A2=PERMUTATIONA(3.2, 2), A3= PERMUTATIONA(3, 2.4).

**Note:** All functions return the same result due to truncation.

	A	B
1	PERMUTATIONA	Formula
2	99	=PERMUTATIONA(3, 2)
3	9	

4	9	=PERMUTATIONA(3.2, 2.3)
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## Related functions

PERMUT: Returns the number of ways to choose some number of objects from a pool of a given size of objects, considering order.COMBIN: The COMBIN function returns the number of ways to choose some number of objects from a pool of a given size of objects.COMBINA: The COMBINA function returns the number of ways to choose some number of objects from a pool of a given size of objects, including ways to choose the same object multiple times (also known as choosing with replacement).

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