

How can I use the FACT function in Excel to calculate the factorial of a given number?

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The FACT function in Excel is a mathematical function that can be used to calculate the factorial of a given number. This function takes only one argument, which is the number for which the factorial needs to be calculated. The factorial of a number is the product of all the numbers from 1 to that number. For example, the factorial of 5 (written as 5!) is equal to $1 \times 2 \times 3 \times 4 \times 5 = 120$. To use the FACT function, simply enter the number for which you want to calculate the factorial as the argument within the function, and the result will be displayed. This function is particularly useful for quickly calculating large factorials, as it eliminates the need for manual calculations.

Let's say you have six bells, each with a different tone, and you want to find the number of unique sequences in which each bell can be rung once. In this example, you are calculating the factorial of six. In general, use a factorial to count the number of ways in which a group of distinct items can be arranged (also called permutations). To calculate the factorial of a number, use the FACT function.

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

Description

Returns the factorial of a number. The factorial of a number is equal to $1*2*3*...*$ number.

Syntax

FACT(number)

The FACT function syntax has the following arguments:

Number Required. The nonnegative number for which you want the factorial. If number is not an integer, it is truncated.

Example

Copy the example data in the following table, and paste it in cell A1 of a new Excel worksheet. For formulas to show results, select them, press F2, and then press Enter. If you need to, you can adjust the column widths to see all the data.

Formula	Description	Result
=FACT(5)	Factorial of 5, or $1*2*3*4*5$	120
=FACT(1.9)	Factorial of the integer of 1.9	1
=FACT(0)	Factorial of 0	1

Formula	Description	Result
=FACT(-1)	Factorial of a negative number returns an error value	#NUM!
=FACT(1)	Factorial of 1	1

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