

How can I create a factorial function in VBA with an example?

Authored by
stats writer

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A factorial function in VBA is a user-defined function that calculates the factorial of a given number. To create this function, first define the function and its parameters, then use a loop to multiply the number by its preceding numbers until it reaches 1. An example of a factorial function in VBA is as follows:

```
Function factorial(num As Integer) As Integer
Dim result As Integer
result = 1
For i = 1 To num
result = result * i
Next i
factorial = result
End Function
```

This function takes in a number as an argument and returns the factorial of that number. For example, if we input 5, the function will calculate $5 \times 4 \times 3 \times 2 \times 1 = 120$ and return the value 120. This function can be used in various VBA programs to calculate factorials and perform other mathematical operations.

Create a Factorial Function in VBA (With Example)

A factorial is the product of all positive integers less than or equal to a given positive integer.

For example, 5 factorial (written as 5!) is calculated as:

$$5! = 5 * 4 * 3 * 2 * 1 = 120$$

You can use the following syntax to create a factorial function in VBA:

Function FindFactorial(N As Integer) As Double

```
Dim i As Integer, result As Long
```

```
result = 1
```

```
For i = 1 To N
```

```
result = result * i
```

```
Next
```

```
FindFactorial = result
```

```
End Function
```

Once you've created this function, you can then type something like `=FindFactorial(A2)` in a cell in Excel to find the factorial of the integer in cell A2.

The following example shows how to use this syntax in practice.

Example: Create a Factorial Function in VBA

Suppose we have the following list of numbers in Excel and we'd like to calculate the factorial of each number:

	A	B	C	D	E	F
1	Values					
2	1					
3	2					
4	3					
5	4					
6	5					
7	6					
8	7					
9	8					
10	9					
11	10					
12						
13						
14						
15						
16						
17						
18						

We can define the following function in VBA to do so:

Function FindFactorial(N As Integer) As Double

Dim i As Integer, result As Long

result = 1

For i = 1 To N

result = result * i

Next

FindFactorial = result

End Function

Once we've created this function, we can then type the following formula into cell B2 to calculate the factorial of the value in cell A2:

=FindFactorial(A2)

We can then click and drag this formula down to each remaining cell in column B:

	A	B	C	D	E	F
1	Values	Factorial				
2	1	1				
3	2	2				
4	3	6				
5	4	24				
6	5	120				
7	6	720				
8	7	5040				
9	8	40320				
10	9	362880				
11	10	3628800				
12						
13						
14						
15						
16						
17						

Notice that column B now displays the factorial of each

integer in column A.

$$1! = 1 \quad 2! = 2 * 1 = 2 \quad 3! = 3 * 2 * 1 = 6 \quad 4! = 4 * 3 * 2 * 1 = 24$$

And so on.

Note: To calculate a factorial in Excel without using VBA, you can use the FACT function.

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