Factorial is denoted by n! and is calculated as follows:  
n! = n \* (n - 1) \* (n - 2) \* ... \* 3 \* 2 \* 1.

In this challenge, your task is to find the sum of the digits in n! for the given n.

**Example**

For n = 5, the output should be  
FactorialSum(n) = 3.

* num = 5;
* num! = 5! = 5 \* 4 \* 3 \* 2 \* 1 = 120;
* Sum of digits of 5! is 1+2+0 = 3;
* Thus, FactorialSum(5) should return 3.

**Input/Output**

* **[time limit] 4000ms (py)**
* **[input] integer num**

An integer.

*Constraints:*  
1 ≤ num ≤ 17.

* **[output] integer**

The sum of all digits of num!.

<https://codefights.com/challenge/yhN2jyWsWDTWA4qnW/main>

def **FactorialSum**(num):

f=1

for i in range(2, num+1):

f\*=i

fstr = str(f)

sum =0

for i in fstr:

sum += int(i)

return sum

print FactorialSum(5)

-----------------otras soluciones-----------------------

static int FactorialSum(int n)

{

long a = 1;

while (n > 1)

a \*= n--;

return a.ToString() .Sum(s => s - '0');

}