Extra Long Factorials

You are given an integer N. Print the factorial of this number.

$$N!= N \times (N-1) \times (N-2) \times \cdots \times 3 \times 2 \times 1$$

Input

Input consists of a single integer N, where $1 \le N \le 100$.

Output

Print the factorial of N.

Example

For an input of 25, you would print $15511210043330985984000000$.

Note: Factorials of $N > 20$ can't be stored even in a $64\text{-}bit$ long long variable. Big integers must be used for such calculations. Languages like Java, Python, Ruby etc. can handle big integers, but we need to write additional code in C/C++ to handle huge values.

We recommend solving this challenge using BigIntegers.