

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 $1 \leq N \leq 100$.

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** — *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.