

<https://course.acciojob.com/idle?question=3583661b-0cd6-4b97-996c-4019152148f2>

- MEDIUM

- Max Score: 40 Points

## I am bored with life

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Holidays have finished. Thanks to the help of the hacker Leha, Noora managed to enter the university of her dreams which is located in a town Pavlopolis. It is well known that universities provide students with dormitory for the period of university studies. Consequently Noora had to leave Vičkopolis and move to Pavlopolis. Thus Leha was left completely alone in a quiet town Vičkopolis. He almost even fell into a depression from boredom!

Leha came up with a task for himself to relax a little. He chooses two integers  $A$  and  $B$  and then calculates the greatest common divisor of integers " $A$  factorial" and " $B$  factorial". Formally the hacker wants to find out  $\text{GCD}(A!, B!)$ . It is well known that the factorial of an integer  $x$  is a product of all positive integers less than or equal to  $x$ . Thus  $x! = 1 \cdot 2 \cdot 3 \cdot \dots \cdot (x - 1) \cdot x$ . For example  $4! = 1 \cdot 2 \cdot 3 \cdot 4 = 24$ . Recall that  $\text{GCD}(x, y)$  is the largest positive integer  $q$  that divides (without a remainder) both  $x$  and  $y$ .

Leha has learned how to solve this task very effective. You are able to cope with it not worse, are not you?

### Input Format

The first and single line contains two integers  $A$  and  $B$  ( $1 \leq A, B \leq 10^9$ ,  $\min(A, B) \leq 12$ ).

### Output Format

Print the greatest common divisor of the factorial of both the numbers.

### Example 1

Input

4 3

Output

6

Explanation

Consider the sample.

$4! = 1 \cdot 2 \cdot 3 \cdot 4 = 24$ .  $3! = 1 \cdot 2 \cdot 3 = 6$ . The greatest common divisor of integers 24 and 6 is exactly 6.

## Example 2

Input

6 10

Output

720

Explanation

Consider the sample.

$6! = 1 \cdot 2 \cdot 3 \cdot 4 \cdot 5 \cdot 6 = 720$ .  $10! = 1 \cdot 2 \cdot 3 \cdot 4 \cdot 5 \cdot 6 \cdot 7 \cdot 8 \cdot 9 \cdot 10 = 3628800$ . The greatest common divisor of integers 720 and 3628800 is exactly 720.

## Constraints:

$1 \leq A, B \leq 10^9$

$\min(A, B) \leq 12$

### Topic Tags

- **Loops**

# My code

```
// n java
import java.util.*;
import java.lang.*;
import java.io.*;

public class Main
{
    public static void main (String[] args) throws
    java.lang.Exception
    {
        //your code here
        Scanner s=new Scanner(System.in);
        long n=s.nextLong();
        long m=s.nextLong();
        long min=n<m?n:m;
        long fac=1;
        for(long i=1;i<=min;i++)
            fac*=i;
        //min fac lo ho jayega

        System.out.print(fac);
    }
}
```