4. Recursion

Objective
Today, we're learning and practicing an algorithmic concept called *Recursion*. Check out the Tutorial tab for learning materials and an instructional video!

Task
Write a *factorial* function that takes a positive integer, ***N*** as a parameter and prints the result of ***N!***(***N*** factorial).

Note: If you fail to use recursion or fail to name your recursive function *factorial* or *Factorial*, you will get a score of **()**.

Input Format

A single integer, **N** (the argument to pass to *factorial*).

Constraints

- **2 <= N <= 12**
- Your submission must contain a recursive function named *factorial*.

Output Format

Print a single integer denoting **N!**.

Sample Input

```
3
```

Sample Output

```
6
```

Explanation

Consider the following steps:

1. **Factorial(3) = 3 x 2 x 1 = 6**
2. **Factorial(2) = 2 x 1 = 2**
3. **Factorial(1) = 1 = 1**