

Mehmet Beraat SAĞIN

URL : <https://www.spoj.com/problems/FCTRL2/>

FCTRL2 - Small factorials

[#math](#) [#big-numbers](#)

You are asked to calculate factorials of some small positive integers.

Input

An integer t , $1 \leq t \leq 100$, denoting the number of testcases, followed by t lines, each containing a single integer n , $1 \leq n \leq 100$.

Output

For each integer n given at input, display a line with the value of $n!$

Example

Sample input:

```
4
1
2
5
3
```

Sample output:

```
1
2
120
6
```

SOURCE CODE :

```
// MEHMET BERAAT SAĞIN - 12.10.2018
```

```
// FOR THIS TASK I USED 2 FUNCTIONS WHICH THEY ARE MULTIPLY AND FACTORIAL
```

```
// IN MULTIPLY FUNCTION I MADE JUST BASIC MULTIPLICATON
```

```
// FACTORIAL FUNCTION IS USING MULTIPLY FUNCTION FOR FINDING FACTORIAL
```

```
// WRITING THE NUMBER TO THE SCREEN
```

```
#include<iostream>
```

```
using namespace std;
```

```
#define MAX 500
```

```
int multiply(int x, int arr[], int size);
```

```
void factorial(int num);
```

```
void factorial(int num)
```

```
{
```

```
    int arr[MAX];
```

```
    arr[0] = 1;
```

```
    int size = 1;
```

```
// THIS FOR LOOP IS ESSENTIAL PART OF FACTORIAL FUNCTION
```

```
// WE ARE MAKING JUST MULTIPLICATION IN HERE WITH THE MULTIPLY FUNCTION
```

```
    for (int x=2; x<=num; x++)
```

```
    {
```

```
        size = multiply(x, arr, size);
```

```
    }
```

```
// THIS FOR LOOP FOR WRITING THE NUMBER ON THE SCREEN
```

```
    for (int i=size-1; i>=0; i--)
```

```
    {
```

```
        cout << arr[i];
```

```
    }
```

```
    cout << endl;
```

```
}
```

```
int multiply(int x, int arr[], int size)
```

```
{
```

```

    int carry = 0;
// MULTIPLY FUNCTION IS
// MAKING BASIC MULTIPLICATION
// INSIDE OF THIS FOR LOOP
    for (int i=0; i<size; i++)
    {
        int product = arr[i] * x + carry;
        arr[i] = product % 10;
        carry = product/10;
    }
// INSDE OF THIS WHILE LOOP
// WE ARE INCREASING SIZE OF ARRAY
// AND WHEN CARRY EQUAL TO 0 WE ARE MOVING ON
    while (carry)
    {
        arr[size] = carry%10;
        carry = carry/10;
        size++;
    }
    return size;
}

int main()
{
    int size;
    cin >> size; // IT IS THE HOW MANY NUMBERS PROGRAM GONNA USE
    int *arr = new int[size];
    for(int i=0; i<size; i++)
    {
        cin >> arr[i]; // TAKING THE NUMBERS ONE BY ONE
    }
    for(int k=0; k<size; k++)

```

```
{
```

```
    factorial(arr[k]); // CALCULATING THE FACTORIAL OF THE NUMBERS HAVE TAKEN
```

```
}
```

```
return 0;
```

```
}
```

The screenshot shows the Sphere Online Judge (SPJ) website interface. The user is logged in and viewing their submission history. The page title is "Sphere online judge". The navigation bar includes links for PROBLEMS, STATUS, RANKS, DISCUSS, CONTESTS, and PROFILE. The user's profile is selected, and the "History of submissions" tab is active. The page shows a list of submissions with columns for ID, DATE, PROBLEM, RESULT, TIME, MEM, and LANG. The submissions are sorted by date, showing a mix of accepted and rejected submissions. A DigitalOcean advertisement is visible on the right side of the page.

ID	DATE	PROBLEM	RESULT	TIME	MEM	LANG
22493135	2018-10-12 15:32:25	Small factorials	accepted	0.00	2.8M	C++ 4.3.2
22493132	2018-10-12 15:32:12	Small factorials	compilation error	-	-	ADA95
22477788	2018-10-10 11:11:17	Small factorials	wrong answer	0.00	2.8M	C++ 4.3.2
22477775	2018-10-10 11:09:45	Small factorials	wrong answer	0.00	2.8M	C++ 4.3.2
22477747	2018-10-10 11:07:07	Small factorials	wrong answer	0.00	2.8M	C++ 4.3.2
22477569	2018-10-10 10:42:06	Fun with Sequences	accepted	0.00	2.7M	C++ 4.3.2
22476838	2018-10-10 09:20:28	Life, the Universe, and Everything	accepted	0.00	2.7M	C++ 4.3.2
22476826	2018-10-10 09:19:30	Life, the Universe, and Everything	wrong answer	0.00	2.7M	C++ 4.3.2