Small factorials

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

Input

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

Output

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

Example

Input:
4
1
2
5
3

Output:
1
2
120
6