

# Factorial length

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[English version](#)

Given integer  $n$ , print length of  $n!$  (which is factorial of  $n$ ).

## Input

The first line of the standard input contains one integer  $t$  ( $t < 10001$ ) which is the number of test cases.

In each of the next  $t$  lines there is number  $n$  ( $0 \leq n \leq 5 \cdot 10^9$ ).

## Output

For each test, print the length of  $n!$ .

## Example

**Input:**

3  
1  
10  
100

**Output:**

1  
7  
158