

# Project Euler #20: Factorial digit sum

## Problem Statement

This problem is a programming version of [Problem 20](#) from [projecteuler.net](#)

$n!$  means  $n \times (n - 1) \times \cdots \times 3 \times 2 \times 1$

For example,  $10! = 10 \times 9 \times \cdots \times 3 \times 2 \times 1 = 3628800$ ,  
and the sum of the digits in the number  $10!$  is  $3 + 6 + 2 + 8 + 8 + 0 + 0 = 27$ .

Find the sum of the digits in the number  $N!$

## Input Format

The first line contains an integer  $T$ , i.e., number of test cases.  
Next  $T$  lines will contain an integer  $N$ .

## Output Format

Print the values corresponding to each test case.

## Constraints

$1 \leq T \leq 100$   
 $0 \leq N \leq 1000$

## Sample Input

```
2
3
6
```

## Sample Output

```
6
9
```