**Big Number**

**Time Limit: 2000/1000 MS (Java/Others)    Memory Limit: 65536/32768 K (Java/Others)  
Total Submission(s): 27728    Accepted Submission(s): 12611**

**Problem Description**

In many applications very large integers numbers are required. Some of these applications are using keys for secure transmission of data, encryption, etc. In this problem you are given a number, you have to determine the number of digits in the factorial of the number.

**Input**

Input consists of several lines of integer numbers. The first line contains an integer n, which is the number of cases to be tested, followed by n lines, one integer 1 ≤ n ≤ 107 on each line.

**Output**

The output contains the number of digits in the factorial of the integers appearing in the input.

**Sample Input**

2

10

20

**Sample Output**

7

19

**Source**

[Asia 2002, Dhaka (Bengal)](http://acm.hdu.edu.cn/search.php?field=problem&key=Asia+2002%2C+Dhaka+%28Bengal%29&source=1&searchmode=source)

**Recommend**

JGShining   |   We have carefully selected several similar problems for you:  [1095](http://acm.hdu.edu.cn/showproblem.php?pid=1095) [1065](http://acm.hdu.edu.cn/showproblem.php?pid=1065) [1094](http://acm.hdu.edu.cn/showproblem.php?pid=1094) [1170](http://acm.hdu.edu.cn/showproblem.php?pid=1170) [1212](http://acm.hdu.edu.cn/showproblem.php?pid=1212)