

# TOPH Noora Number

Time Limits:2s

Memory Limit : 512MB

A number is a “Noora” number if the count of distinct digits of the number is equal to the maximum digit of the number. So, 123 is a Noora number but 124 is not. Some of the first Noora number are 1,11,12,20,21,103,111,112, .... .

Given  $n$ , you have to tell how many Noora number  $\leq n$

## Input

Input starts with an integer  $T$  ( $1 \leq T \leq 100000$ ), denoting the number of test cases. Each case contains an integer  $n$  ( $1 \leq n \leq 10^{18}$ ).

## Output

For each test case, output the number of Noora number  $\leq n$

## Samples

Input

Output

5	1
10	5
100	29
1000	213
10000	1893
100000	