For a given non-negative integer number *N*, find the minimal natural *Q* such that the product of all digits of *Q* is equal *N*.

# Input

The first line of input contains one positive integer number, which is the number of data sets. Each subsequent line contains one data set which consists of one non-negative integer number *N* (0 ≤*N*≤

109).

# Output

For each data set, write one line containing the corresponding natural number *Q* or ‘-1’ if *Q* does not exist.

# Sample Input

4

0

1

10

123456789

# Sample Output

0

1

25

-1