

5084 Nice numbers

A “nice number” is a number that starts with some repeating sequences 123456789 and followed by some additional trailing zeroes:

$$123456789\dots1234567890..0$$

Given a positive integer N , the question is whether there is a multiple of N which is a nice number? For example, for $N = 342$ we have:

$$342 * 3609847635188795 = 1234567891234567890$$

Given an integer N , your task is to write a program that will find the smallest multiple of N which is a nice number or determine that no such one exists.

Input

The input file consists of several data sets. The first line of the input file contains the number of data sets which is a positive integer and is not bigger than 20. The following lines describe the data sets.

Each data set consists of only one line which contains an integer N ($1 < N < 10^6$).

Output

For each data set, write in one line the smallest multiple of N which is a nice number, or ‘-1’ if no such number exists.

Sample Input

```
1
342
```

Sample Output

```
1234567891234567890
```