
5. Decreasing Digits

Program Name: Decreasing.java

Input File: decreasing.dat

Given a positive integer less than 100, there is a multiple of that integer that can be expressed using digits that are in non-increasing order. For example, 530 is a multiple of 53 and the digits 5, 3, and 0 are in non-increasing order.

You are to write a program that will find the smallest multiple of a given integer that can be expressed with digits in non-increasing order.

Input

The first line of input will contain a single integer n that indicates the number of test cases to follow. Each of the following n lines will contain a single integer x ($3 < x < 100$).

Output

For each number x input, you will print the smallest multiple of x with all digits in non-increasing order.

Example Input File

```
4
4
53
72
30
```

Example Output to Screen

```
8
530
432
60
```