Prime Friendly Numbers

Given **N**, find the largest number **X** not greater than **N** such that **X** is prime friendly. A number is called prime friendly when it satisfies both of the following conditions:

1. The number itself is a prime.
2. All its digits in base **10** are also primes. In other words, the number consists of only the digits **2, 3, 5, 7.**

Input

The first line contains an integer **T**, denoting the number of test cases. Each test case contains a single positive integer **N**.

Constraints

- $1 < T \leq 1000$
- $1 < N \leq 10^{18}$

Output

For each test case, output the case number followed by the largest number **X** not greater than **N**. Please refer to the sample input/output section for more clarity of the format.

Example

Input:
5
10
100
1000
10000
100000

Output:
Case 1: 7
Case 2: 73
Case 3: 773
Case 4: 7757
Case 5: 77773