# HackerRank

# Separate the Numbers

A numeric string, s, is *beautiful* if it can be split into a sequence of two or more positive integers,  $a[1], a[2], \ldots, a[n]$ , satisfying the following conditions:

- 1. a[i] a[i-1] = 1 for any  $1 < i \le n$  (i.e., each element in the sequence is 1 more than the previous element).
- 2. No a[i] contains a leading zero. For example, we can split s = 10203 into the sequence  $\{1, 02, 03\}$ , but it is *not* beautiful because 02 and 03 have leading zeroes.
- 3. The contents of the sequence cannot be rearranged. For example, we can split s = 312 into the sequence  $\{3, 1, 2\}$ , but it is not beautiful because it breaks our first constraint (i.e.,  $1 3 \neq 1$ ).

The diagram below depicts some beautiful strings:



Perform q queries where each query consists of some integer string s. For each query, print whether or not the string is beautiful on a new line. If it is beautiful, print <u>YES</u> x, where x is the first number of the increasing sequence. If there are multiple such values of x, choose the smallest. Otherwise, print <u>NO</u>.

# **Function Description**

Complete the *separateNumbers* function in the editor below.

separateNumbers has the following parameter:

• s: an integer value represented as a string

#### Prints

- *string:* Print a string as described above. Return nothing.

# **Input Format**

The first line contains an integer q, the number of strings to evaluate. Each of the next q lines contains an integer string s to query.

# Constraints

- $1 \leq q \leq 10$
- $1 \leq |s| \leq 32$
- $s[i] \in [0-9]$