

Separate the Numbers



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

1. $a[i] - a[i - 1] = 1$ for any $1 < i \leq n$ (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:

$$\begin{aligned} \text{"1234"} &= \text{"1"} + \text{"2"} + \text{"3"} + \text{"4"} \\ \text{"91011"} &= \text{"9"} + \text{"10"} + \text{"11"} \\ \text{"99100"} &= \text{"99"} + \text{"100"} \end{aligned}$$

You must 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's beautiful, print **YES x** , where x is the first number of the increasing sequence. If there are multiple such values of x , choose the smallest. Otherwise, print **NO**.

Function Description

Complete the `separateNumbers` function in the editor below. It should print a string as described above.

`separateNumbers` has the following parameter:

- s : an integer value represented as a string

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

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

Output Format

For each query, print its answer on a new line (i.e., either **YES x** where x is the smallest first number of the increasing sequence, or **NO**).

Sample Input 0

```
7
1234
91011
99100
101103
010203
13
1
```

Sample Output 0

```
YES 1
YES 9
YES 99
NO
NO
NO
NO
```

Explanation 0

The first three numbers are beautiful (see the diagram above). The remaining numbers are not beautiful:

- For $s = 101103$, all possible splits violate the first and/or second conditions.
- For $s = 010203$, it starts with a zero so all possible splits violate the second condition.
- For $s = 13$, the only possible split is $\{1, 3\}$, which violates the first condition.
- For $s = 1$, there are no possible splits because s only has one digit.

Sample Input 1

```
4
99910001001
7891011
9899100
999100010001
```

Sample Output 1

```
YES 999
YES 7
YES 98
NO
```