

Bigger is Greater



Please note that this is a team event, and your submission will be accepted only as a part of a team, even single member teams are allowed. Please click [here](#) to register as a team, if you have NOT already registered.

Given a word w , rearrange the letters of w to construct another word s in such a way that, s is lexicographically greater than w .

Input Format

The first line of input contains t , number of test cases. Each of the next t lines contains w .

Constraints

$$1 \leq t \leq 10^5$$

$$1 \leq |w| \leq 100$$

w will contain only lower case english letters and its' length will not exceed 100.

Output Format

For each testcase, output a string lexicographically bigger than w in a separate line. In case of multiple possible answers, print the lexicographically smallest one and if no answer exists, print **no answer**.

Sample Input

```
3
ab
bb
hefg
```

Sample Output

```
ba
no answer
hegf
```

Explanation

- Testcase 1 : There exists only one string greater than **ab** which can be built by rearranging **ab**. That is **ba**.
- Testcase 2 : Not possible to re arrange **bb** and get a lexicographically greater string.
- Testcase 3 : **hegf** is the next string (lexicographically greater) to **hefg**.