ICPC NAQ 2015 F - Quick Brown Fox

Time limit: 1.0s   **Memory limit:** 1G

ICPC North America Qualifier 2015, Problem F

A *pangram* is a phrase that includes at least one occurrence of each of the 26 letters, $a \ldots z$. You're probably familiar with this one:

> The quick brown fox jumps over the lazy dog.

Your job is to recognize pangrams. For phrases that don't contain every letter, report what letters are missing. We'll say that a particular letter occurs in the phrase if it occurs as either uppercase or lowercase.

Input Specification

Input starts with a line containing an integer $1 \le N \le 50$. The next N lines are each a single phrase, possibly containing uppercase and lowercase letters, spaces, decimal digits and punctuation characters `.`, `,`, `?`, `!`, `'` and `"`. Each phrase contains at least one and no more than 100 characters.

Output Specification

For each input phrase, output `pangram` if it qualifies as a pangram. Otherwise, output the word `missing` followed by a space and then the list of letters that didn't occur in the phrase. The list of missing letters should be reported in lowercase and should be sorted alphabetically.

Sample Input

```
3
The quick brown fox jumps over the lazy dog.
ZYXW, vu TSR Ponm lkj ihgfd CBA.
.,?!'" 92384 abcde FGHIJ
```

Sample Output

```
pangram
missing eq
missing klmnopqrstuvwxyz
```