

Reverse Words Matching Game

Problem Statement

KG has a set of words, some are same, and some are not. KG wants to play a matching game with these set of words. Of course, KG will do something to make the game “not so boring”. For each word, he may do the following:

1. Choose a prefix with even length; let's call the length as L .
2. Reverse the order of the chosen prefix.
3. Repeat these two step as many as he wants.

For example, “program”, he can choose L as 2, 4, or 6. If he choose $L = 4$, the word then becomes “gorpram” and he can continue to change the word to make “ogrpram”, “arprgom”, etc.

After KG manipulates the words, he wants you to match as many pairs of words that are same before the manipulation as you can.

For example, given that:

"bertgod", "god", "stressed", "desserts", "dog"

The word "desserts" can be converted to "stressed" by first reversing all 8 characters. And the remaining 3 words cannot be paired up. For “god” and “dog”, they are from different word sources, as KG can reverse the prefix with **even** number.

Input

For each test case, there is an integer N ($0 < N < 52$) representing the number of words in this game. On the next line, there are N words, separated by a space. The length of the words, s , is $0 < s < 52$). All the characters in the words are lowercase. The input ends with EOF

Output

For each case, output the minimal number of strings that cannot be matched to any other word.

Sample

Input	Output
5	3
bertgod god stressed desserts dog	5
5	0
no zaphod just very improbable	
2	
ot to	