Algogoge

Input file:	**standard input**
Output file:	**standard output**
Time limit:	1 second
Memory limit:	256 megabytes

You are given string S of size N. In one operation you can choose subsequence of this string (not necessarily of consecutive elements) which is equal to **algoge**, and delete it from the string. So, when you delete the chosen subsequence, string S will contain all other $N - 6$ letters in the same order. You can repeat this operation with the new string.

If you play optimally, what is the largest number of operations you can do?

Input

- The first line of input contains one number T $(1 \leq T \leq 10000)$, the number of test cases.

- In each of the next T lines of input, there is one string S for which you should calculate the maximum number of operations explained above. Each of the string contains only small letters of english alphabet. The sum of sizes of all given strings will not exceed 10^6.

Output

In each of T lines of output you should write one number, maximum numbers of operations for the given string.

Example

standard input	standard output
2	2
alalgogegogegogeal	0
nemozenamnikonistajacismoodsudbine	

Note

- In the first test case you can find two disjunct subsequence which are equal to **algoge**, indices of those subsequences are: $(1, 2, 5, 6, 7, 8)$ i $(3, 4, 9, 10, 11, 12)$.

- In the second test there are no subsequence which are equal to **algoge**, the string is exactly as it should be.