Problem C: Ctrl+C Ctrl+V

Time limit: 5s, memory limit: 1GB.

– *How are you doing with that autobiography?*
– *Er, Ania, what? Was there any homework for the Polish class?*
– *Come on, we were supposed to write an autobiography. Did you forget?*
– *I forgot. Can I copy it from you?*
– *You want to copy an autobiography!? Fine, but at least make some changes...*

You are given a string s consisting of lowercase English letters. This is an autobiography written by Ania, which means it may contain the word `ania` as a contiguous substring, perhaps even multiple times. Determine the minimum number of characters that need to be changed in s so that it does not contain the word `ania` as a contiguous substring.

Input

The first line of input contains the number of test cases z ($1 \leqslant z \leqslant 10\,000$). The descriptions of the test cases follow.

The first and only line of each test case contains the string s - Ania's autobiography. The string's length is l ($1 \leqslant l \leqslant 10^6$). It solely consists of lowercase letters of the English alphabet.

The total length of the strings in all test cases does not exceed $5\,000\,000$.

Output

For each test case, in a separate line, write one integer, representing the minimum number of changes that have to be made to the autobiography so that it does not contain a substring `ania`.

Example

For an example input:	The correct output is:
3 aniasieurodzilaapotemnicsieniedzialo nicciekawegouanianiagnieszkianialicji jeszczekrotszaautobiografiaani	1 2 0