Even words

Assume that we are given an English word. We call it an “even word” if each character in English alphabet appears even times in it. Of course, zero is also an even number. For example, abba, aenean, appall, anna are even words.

Given a string T, write a program to count the number of its substrings which are even words. If the same substring appears more than twice in T, count them individually.

For example, consider the string T=mississippi. It contains 66 substrings and 12 of them are even words: ippi, issi, issi, issipp, ississ, ississippi, pp, ss, ss, ssippi, ssissi, and ssissipp.

[Input]
The first line of the input file contains the number T of test cases in the file ($T \leq 100$). Each test case consists of one line, which contains a string in English lower case. The maximum length of the string is 50,000.

There are four kinds of inputs listed as follows.

- Set 1: The maximum length of the string is 100.
- Set 2: The maximum length of the string is 500.
- Set 3: The maximum length of the string is 10,000.
- Set 4: The maximum length of the string is 50,000.

[Output]
For each test case given, print one line with one integer, which is the number of substrings of the input string which are even words.

[I/O Example]
Input

```
2
appall
mississippi
```

Output

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4
12
```