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The Love-Letter Mystery 🔖

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James found a love letter his friend Harry has written for his girlfriend. James is a prankster, so he decides to meddle with the letter. He changes all the words in the letter into palindromes.

To do this, he follows two rules:

1. He can reduce the value of a letter, e.g. he can change *d* to *c*, but he cannot change *c* to *d*.

2. In order to form a palindrome, if he has to repeatedly reduce the value of a letter, he can do it until the letter becomes *a*. Once a letter has been changed to *a*, it can no longer be changed.

Each reduction in the value of any letter is counted as a single operation. Find the minimum number of operations required to convert a given string into a palindrome.

Input Format

The first line contains an integer T, i.e., the number of test cases.
The next T lines will contain a string each. The strings do not contain any spaces.

Constraints
$1 \leq T \leq 10$
$1 \leq \text{length of string} \leq 10^4$
All characters are lower case English letters.

Output Format

A single line containing the number of minimum operations corresponding to each test case.

Sample Input

```
4
abc
abcba
abcd
cba
```

Sample Output

```
2
0
4
2
```

Explanation

1. For the first test case, ab**c** -> ab**b** -> aba.

2. For the second test case, *abcba* is already a palindromic string.

3. For the third test case, abc**d** -> abc**c** -> abc**b** -> abc**a** = abc*a* -> ab**b**a.

4. For the fourth test case, *c*ba -> *b*ba -> aba.

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```java
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      static int theLoveLetterMystery(String s){
10         // Complete this function
11     }
12
13     public static void main(String[] args) {
14         Scanner in = new Scanner(System.in);
15         int q = in.nextInt();
16         for(int a0 = 0; a0 < q; a0++){
17             String s = in.next();
18             int result = theLoveLetterMystery(s);
19             System.out.println(result);
20         }
21     }
22  }
23
```

Line: 1 Col: 1

⬆ Upload Code as File   ☐ Test against custom input   Run Code   Submit Code