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The Love-Letter Mystery

Problem

Submissions

Leaderboard

James found a love letter that his friend Harry has written to 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 only reduce the value of a letter by **1**, i.e. he can change *d* to *c*, but he cannot change *c* to *d* or *d* to *b*.
2. The letter *a* may not be reduced any further.

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.

For example, given the string *s* = **cde**, the following two operations are performed: *cde* → *cdd* → *cdc*.

Function Description

Complete the *theLoveLetterMystery* function in the editor below. It should return the integer representing the minimum number of operations needed to make the string a palindrome.

theLoveLetterMystery has the following parameter(s):

- s : a string

Input Format

The first line contains an integer q , the number of queries.

The next q lines will each contain a string s .

Constraints

$$1 \leq q \leq 10$$

$$1 \leq |s| \leq 10^4$$

All strings are composed of lower case English letters, *ascii[a-z], with no spaces.

Output Format

A single line containing the minimum number of 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, $abc \rightarrow abb \rightarrow aba$.
2. For the second test case, $abcba$ is already a palindromic string.
3. For the third test case, $abcd \rightarrow abcc \rightarrow abcb \rightarrow abca \rightarrow abba$.
4. For the fourth test case, $cba \rightarrow bba \rightarrow aba$.



Contest ends in 13 minutes



Submissions: 1

Max Score: 20

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Current Buffer (saved locally, editable)  

Java 8



```
1 import java.io.*;
2 import java.math.*;
3 import java.security.*;
4 import java.text.*;
5 import java.util.*;
6 import java.util.concurrent.*;
7 import java.util.regex.*;
8
9 public class Solution {
10
11     // Complete the theLoveLetterMystery function below.
12     static int theLoveLetterMystery(String s) {
```

```
13     int op = 0;
14     int i = 0;
15     int j = s.length() - 1;
16     while(i < j)
17     {
18         op += Math.abs(s.charAt(i) - s.charAt(j));
19         i++;
20         j--;
21     }
22     return op;
23
24
25
26 }
27
28 private static final Scanner scanner = new Scanner(System.in);
29
30 public static void main(String[] args) throws IOException {
31     BufferedWriter bufferedWriter = new BufferedWriter(new
32     FileWriter(System.getenv("OUTPUT_PATH")));
33
34     int q = scanner.nextInt();
35     scanner.skip("(\\r\\n|\\[\\n\\r\\u2028\\u2029\\u0085])?");
36
37     for (int qItr = 0; qItr < q; qItr++) {
38         String s = scanner.nextLine();
39
40         int result = theLoveLetterMystery(s);
41
42         bufferedWriter.write(String.valueOf(result));
43         bufferedWriter.newLine();
44     }
45
46     bufferedWriter.close();
47
48     scanner.close();
```

```
48     }  
49   }  
50
```

Line: 1 Col: 1

 [Upload Code as File](#) ☐ [Test against custom input](#)

[Run Code](#)[Submit Code](#)Testcase 0 Testcase 1 

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
4  
abc  
abcba  
abcd  
cba
```

Your Output (stdout)

```
2  
0  
4  
2
```

Expected Output

```
2  
0
```

4

2

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