

# Earse

## Description

Give you a string, composed of lower case English alphabets. Each time, you may choice a prefix that is a palindrome and erase the left half. If the prefix string's length is odd, the charactor at the middle will be erased, too. How many operations do you need to erase the whole string?

## Input

The first line contains an integer  $T$ , indicating the number of test cases. Each test case contains only one string  $S$ , the one you need to operate on.

- $1 \leq T \leq 100$
- $1 \leq |S| \leq 200000$

## Output

Output the minimum number of operations needed to erase the whole string for each test case.

## Sample Input

```
3
mmnrrnm
mnrnmnmnrnm
mmmmmmmmmmmmmmmmmm
```

## Sample Output

```
4
4
5
```