

Palindromic Substring Discovery

locked

Given a string S , find the largest substring W such that you can move the characters of W as you see fit and create a palindrome.

Input Format

T denoting the number of test cases.

For every T testcases, there is a single line with N denoting the length of string in this testcase and S string.

Constraints

$$1 \leq T \leq 5$$

$$1 \leq N \leq 100000$$

Output Format

Output T lines with a single digit each denoting the maximum length possible for W

Sample Input 0

```
3
4 abcd
6 aabbcd
7 abcbcd
```

Sample Output 0

```
1
5
7
```

Explanation 0

Testcase 1: It is impossible to create a long palindromic substring. Pick any letter and call it a palindrome of length 1.

Testcase 2: aabbc can be made to a palindrome aacbb of length 5.

Testcase 3: abcbcd can be made to abcdcb of length 7.