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PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

B. Minority

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given a string s, consisting only of characters '0' and '1'.

You have to choose a contiguous substring of s and remove all occurrences of the character, which is a strict minority in it, from the substring.

That is, if the amount of '0's in the substring is strictly smaller than the amount of '1's, remove all occurrences of '0' from the substring. If the amount of '1's is strictly smaller than the amount of '0's, remove all occurrences of '1'. If the amounts are the same, do nothing.

You have to apply the operation **exactly once**. What is the maximum amount of characters that can be removed?

Input

The first line contains a single integer t $(1 \le t \le 10^4)$ — the number of testcases.

The only line of each testcase contains a non-empty string s, consisting only of characters '0' and '1'. The length of s doesn't exceed $2 \cdot 10^5$.

The total length of strings s over all testcases doesn't exceed $2 \cdot 10^5$.

Output

For each testcase, print a single integer — the maximum amount of characters that can be removed after applying the operation **exactly once**.

Example

input Copy

```
4
01
1010101010111
00110001000
1
```

output Copy

```
0
5
3
0
```

Note

In the first testcase, you can choose substrings "0", "1" or "01". In "0" the amount of '0' is 1, the amount of '1' is 0. '1' is a strict minority, thus all occurrences of it are removed from the substring. However, since there were 0 of them, nothing changes. Same for "1". And in "01" neither of '0' or '1' is a strict minority. Thus, nothing changes. So there is no way to remove any characters.

In the second testcase, you can choose substring "10101010101". It contains 5 characters '0' and 6 characters '1'. '0' is a strict minority. Thus, you can remove all its occurrences. There exist other substrings that produce the same answer.

Educational Codeforces Round 122 (Rated for Div. 2)

Finished

Practice

☆

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++17 7.3.0

Choose file: Choose File No file chosen

Submit

→ Problem tags

greedy *800

No tag edit access

→ Contest materials

- Announcement
- Tutorial

In the third testcase, you can choose substring "011000100". It contains 6 characters '0' and 3 characters '1'. '1' is a strict minority. Thus, you can remove all its occurrences.