C. Frog Jumps

2 seconds, 256 megabytes

There is a frog staying to the left of the string $s = s_1 s_2 \ldots s_n$ consisting of n characters (to be more precise, the frog initially stays at the cell 0). Each character of s is either 'L' or 'R'. It means that if the frog is staying at the i-th cell and the i-th character is 'L', the frog can jump only to the left. If the frog is staying at the i-th cell and the i-th character is 'R', the frog can jump only to the right. **The frog can jump only to the right from the cell** 0.

Note that the frog can jump into the same cell twice and can perform as many jumps as it needs.

The frog wants to reach the $n + 1$-th cell. The frog chooses some **positive integer** value d **before the first jump** (and cannot change it later) and jumps by no more than d cells at once. I.e. if the i-th character is 'L' then the frog can jump to any cell in a range $[max(0, i - d); i - 1]$, and if the i-th character is 'R' then the frog can jump to any cell in a range $[i + 1; min(n + 1; i + d)]$.

The frog doesn't want to jump far, so your task is to find the minimum possible value of d such that the frog can reach the cell $n + 1$ from the cell 0 if it can jump by no more than d cells at once. **It is guaranteed that it is always possible to reach** $n + 1$ **from** 0.

You have to answer t independent test cases.

Input

The first line of the input contains one integer t ($1 \leq t \leq 10^4$) — the number of test cases.

The next t lines describe test cases. The i-th test case is described as a string s consisting of at least 1 and at most $2 \cdot 10^5$ characters 'L' and 'R'.

It is guaranteed that the sum of lengths of strings over all test cases does not exceed $2 \cdot 10^5$ ($\sum |s| \leq 2 \cdot 10^5$).

Output

For each test case, print the answer — the minimum possible value of d such that the frog can reach the cell $n + 1$ from the cell 0 if it jumps by no more than d at once.
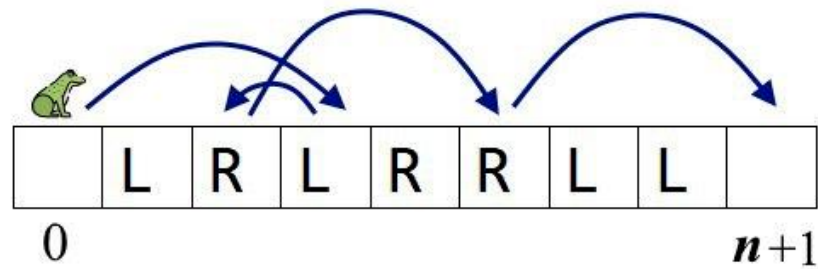
```
input

6
LRLRRLL
L
LLR
RRRR
LLLLLL
R
```

```
output

3
2
3
1
7
1
```

The picture describing the first test case of the example and one of the possible answers:

```
|   | L | R | L | R | R | L | L |   |
    0                               n+1
```

In the second test case of the example, the frog can only jump directly from 0 to $n+1$.

In the third test case of the example, the frog can choose $d = 3$, jump to the cell 3 from the cell 0 and then to the cell 4 from the cell 3.

In the fourth test case of the example, the frog can choose $d = 1$ and jump 5 times to the right.

In the fifth test case of the example, the frog can only jump directly from 0 to $n+1$.

In the sixth test case of the example, the frog can choose $d = 1$ and jump 2 times to the right.