PROBLEM 1

# TeleTrip

**Input file:** `telein.txt`
**Output file:** `teleout.txt`

**Time and memory limits:** 1 second, 1 GB

Looking for a change of pace, you've decided to move to Infinity Valley and start a new life as a farmer. One of the most important things a new farmer should do is meet their new neighbours!

Infinity Valley has just a single street, with infinitely many farmhouses on it. You start in front of your own farmhouse and are going to follow a sequence of $N$ instructions. There are three possible instructions, each represented by an uppercase character:

- L: walk one farmhouse to the left.
- R: walk one farmhouse to the right.
- T: teleport back to your own farmhouse.

After following a sequence of these instructions, you would like to know how much of Infinity Valley you will have explored. How many different farmhouses (including your own) will you have visited?

## Input

- The first line of input contains the integer $N$.
- The second line of input contains a string of $N$ characters describing the sequence.

## Output

Your program must output the number of different farmhouses you visit (including your own).

| Sample input 1 | Sample input 2 | Sample input 3 |
|---|---|---|
| 7 | 7 | 3 |
| LLRRRLL | RRTRRRR | TTT |

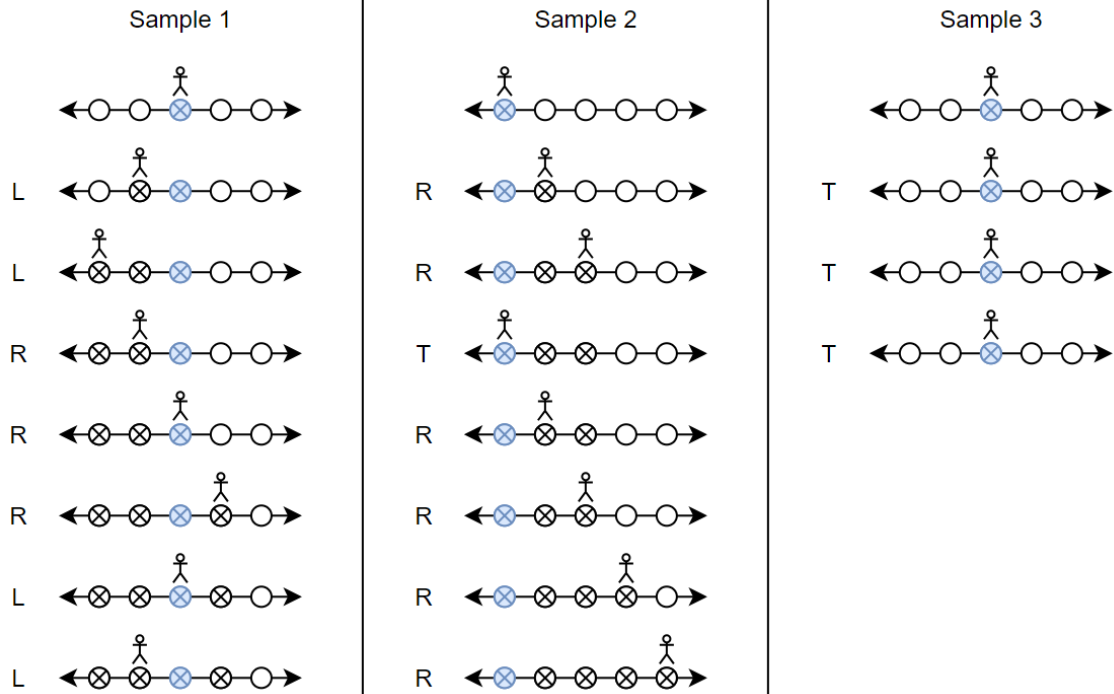| Sample output 1 | Sample output 2 | Sample output 3 |
|---|---|---|
| 4 | 5 | 1 |

## Explanation

Each of the sample cases are illustrated below. The farmhouses are represented by circles. Your starting farmhouse is shaded blue. Note that although only five farmhouses are shown, the street continues infinitely in both directions. Each farmhouse you visit is marked with a cross.



## Subtasks and constraints

For all subtasks:

- $1 \leq N \leq 100\,000$.
- Each character of the string is L, R, or T.

Additionally:

- For Subtask 1 (35 marks), each character of the string is either L or R.
- For Subtask 2 (35 marks), each character of the string is either R or T.
- For Subtask 3 (30 marks), no special constraints apply.