

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS STANDINGS CUSTOM INVOCATION

D. Right Left Wrong

time limit per test: 2 seconds
memory limit per test: 256 megabytes

Vlad found a strip of n cells, numbered from left to right from 1 to n . In the i -th cell, there is a positive integer a_i and a letter s_i , where all s_i are either 'L' or 'R'.

Vlad invites you to try to score the maximum possible points by performing any (possibly zero) number of operations.

In one operation, you can choose two indices l and r ($1 \leq l < r \leq n$) such that $s_l = \text{'L'}$ and $s_r = \text{'R'}$ and do the following:

- add $a_l + a_{l+1} + \dots + a_{r-1} + a_r$ points to the current score;
- replace s_i with '.' for all $l \leq i \leq r$, meaning you can no longer choose these indices.

For example, consider the following strip:

3	5	1	4	3	2
L	R	L	L	L	R

You can first choose $l = 1, r = 2$ and add $3 + 5 = 8$ to your score.

3	5	1	4	3	2
.	.	L	L	L	R

Then choose $l = 3, r = 6$ and add $1 + 4 + 3 + 2 = 10$ to your score.

3	5	1	4	3	2
.

As a result, it is impossible to perform another operation, and the final score is 18.

What is the maximum score that can be achieved?

Input

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

The first line of each test case contains one integer n ($2 \leq n \leq 2 \cdot 10^5$) — the length of the strip.

The second line of each test case contains n integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 10^5$) — the numbers written on the strip.

The third line of each test case contains a string s of n characters 'L' and 'R'.

It is guaranteed that the sum of the values of n across all test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, output one integer — the maximum possible number of points that can be scored.

Example

input	Copy
4 6 3 5 1 4 3 2 LRLLLR 2 2 8 LR 2 3 9 RL 5 1 2 3 4 5 LRLRR	
output	Copy
18 10 0 22	

Codeforces Round 966 (Div. 3).

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++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
276263150	Aug/13/2024 19:19	Accepted
276260853	Aug/13/2024 19:16	Wrong answer on test 2
276259120	Aug/13/2024 19:14	Wrong answer on test 2
276258562	Aug/13/2024 19:14	Wrong answer on test 2
276256870	Aug/13/2024 19:12	Wrong answer on test 2
276237174	Aug/13/2024 18:53	Wrong answer on test 2
276222031	Aug/13/2024 18:41	Wrong answer on test 2
276198718	Aug/13/2024 18:25	Wrong answer on test 2

→ Problem tags

greedy implementation two pointers

*1200

No tag edit access

→ Contest materials

- Announcement
- Tutorial #1
- Video Tutorial (en)
- Discussion stream (en)