

## B. Wilbur and Array

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Wilbur the pig is tinkering with arrays again. He has the array  $a_1, a_2, \dots, a_n$  initially consisting of  $n$  zeros. At one step, he can choose any index  $i$  and either add  $1$  to all elements  $a_i, a_{i+1}, \dots, a_n$  or subtract  $1$  from all elements  $a_i, a_{i+1}, \dots, a_n$ . His goal is to end up with the array  $b_1, b_2, \dots, b_n$ .

Of course, Wilbur wants to achieve this goal in the minimum number of steps and asks you to compute this value.

### Input

The first line of the input contains a single integer  $n$  ( $1 \leq n \leq 200\,000$ ) — the length of the array  $a_i$ . Initially  $a_i = 0$  for every position  $i$ , so this array is not given in the input.

The second line of the input contains  $n$  integers  $b_1, b_2, \dots, b_n$  ( $-10^9 \leq b_i \leq 10^9$ ).

### Output

Print the minimum number of steps that Wilbur needs to make in order to achieve  $a_i = b_i$  for all  $i$ .

### Examples

input
5 1 2 3 4 5
output
5
input
4 1 2 2 1
output
3

### Note

In the first sample, Wilbur may successively choose indices  $1, 2, 3, 4$ , and  $5$ , and add  $1$  to corresponding suffixes.

In the second sample, Wilbur first chooses indices  $1$  and  $2$  and adds  $1$  to corresponding suffixes, then he chooses index  $4$  and subtract  $1$ .

### Codeforces Round #331 (Div. 2)

Finished

### → Virtual participation

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Start virtual contest

### → Problem tags

greedy

No tag edit access

### → Contest materials

- Announcement 
- Tutorial 