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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

# C. Sequence

time limit per test: 1 second memory limit per test: 64 megabytes

Little Petya likes to play very much. And most of all he likes to play the following game:

He is given a sequence of N integer numbers. At each step it is allowed to increase the value of any number by 1 or to decrease it by 1. The goal of the game is to make the sequence non-decreasing with the smallest number of steps. Petya is not good at math, so he asks for your help.

The sequence a is called non-decreasing if  $a_1 \le a_2 \le ... \le a_N$  holds, where N is the length of the sequence.

#### Input

The first line of the input contains single integer N ( $1 \le N \le 5000$ ) — the length of the initial sequence. The following N lines contain one integer each — elements of the sequence. These numbers do not exceed  $10^9$  by absolute value.

#### Output

Output one integer — minimum number of steps required to achieve the goal.

# Examples

input	Сору
5	
3 2 -1 2 11	
output	Сору
4	
input	Сору
5 2 1 1 1 1	
output	Сору
1	

#### → Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

## **Codeforces Beta Round 13**

#### **Finished**

Practice



## → Virtual participation

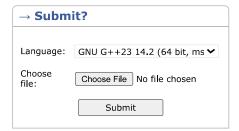
Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you solve these problems in the archive. If you just want to solve some problem from a 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

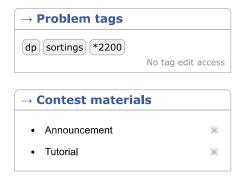
### → Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest



→ Last submissions			
Submission	Time	Verdict	
326015926	Jun/25/2025 16:41	Accepted	



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