

PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

A. Police Recruits

time limit per test: 1 second

memory limit per test: 256 megabytes

The police department of your city has just started its journey. Initially, they don't have any manpower. So, they started hiring new recruits in groups.

Meanwhile, crimes keeps occurring within the city. One member of the police force can investigate only one crime during his/her lifetime.

If there is no police officer free (isn't busy with crime) during the occurrence of a crime, it will go untreated.

Given the chronological order of crime occurrences and recruit hirings, find the number of crimes which will go untreated.

Input

The first line of input will contain an integer n ($1 \leq n \leq 10^5$), the number of events. The next line will contain n space-separated integers.

If the integer is -1 then it means a crime has occurred. Otherwise, the integer will be positive, the number of officers recruited together at that time. No more than 10 officers will be recruited at a time.

Output

Print a single integer, the number of crimes which will go untreated.

Examples

input

```
3  
-1 -1 1
```

output

```
2
```

input

```
8  
1 -1 1 -1 -1 1 1 1
```

output

```
1
```

input

```
11  
-1 -1 2 -1 -1 -1 -1 -1 -1 -1 -1
```

output

```
8
```

Codeforces Round 244 (Div. 2)

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.

→ Clone Contest to Mashup

You can clone this contest to a mashup.

→ Submit?

Language: Almost always, if you send a solution on PyPy, it works much faster

Choose file:

→ Last submissions

Submission	Time	Verdict
339223696	Sep/18/2025 11:04	Accepted
339223483	Sep/18/2025 11:07	Wrong answer on test 3