ICPC Assiut University Community

Newcomers Training , Do Your Best



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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

P. Police Recruits

time limit per test: 1 second memory limit per test: 256 megabytes input: standard input output: standard output

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

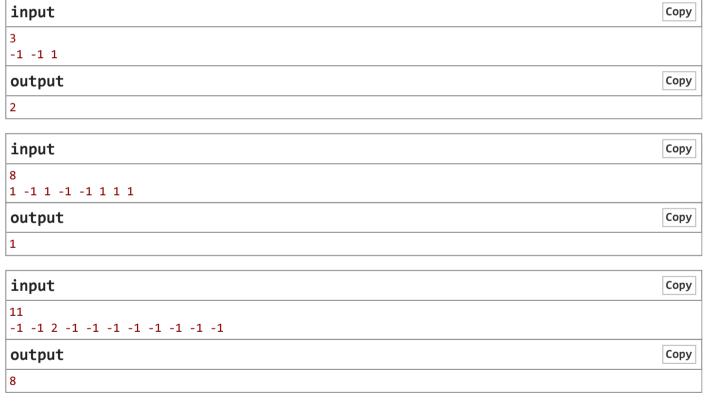
The first line of input will contain an integer n ($1 \le n \le 10^5$), the number of events. The next line will contain n space-separated integers.

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



Note

Lets consider the second example:

- 1. Firstly one person is hired.
- 2. Then crime appears, the last hired person will investigate this crime.
- 3. One more person is hired.
- 4. One more crime appears, the last hired person will investigate this crime.
- 5. Crime appears. There is no free policeman at the time, so this crime will go untreated.
- 6. One more person is hired.
- 7. One more person is hired.
- 8. One more person is hired.

The answer is one, as one crime (on step 5) will go untreated.

<u>Assiut University Training - Newcomers</u>

Public

Participant









- Sheet #10 (General Hard)
- Sheet #9 (General medium)
- Sheet #8 (General easy)
- Sheet #7 (Recursion)
- Sheet #6 (Math Geometry)
- Sheet #5 (Functions)
- Sheet #4 (Strings)
- Contest #3.1
- Sheet #3 (Arrays)
- Contest #2
- Sheet #2 (Loops)
- Contest #1
- Sheet #1 (Data type Conditions)

Sheet #8 (General easy)

Finished

Practice





This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the link.