PROBLEMS   SUBMIT CODE   MY SUBMISSIONS   STATUS   STANDINGS   CUSTOM INVOCATION

G. Ranges Every Where

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Given an array A that contains N distinct integers $A_1, A_2, ..., A_N$.

A range is a finite set of consecutive integers. Formally, for any two positive integers, $a \leq b$ the range $[a, b]$ is defined to be the set of all integers that lies between a and b inclusive. For example, $[3, 3] = \{3\}$ and $[4, 7] = \{4, 5, 6, 7\}$.

We want to represent the given array A as a union of some ranges. Print the minimum number of ranges you need to represent the array A.

Input
The first line will contain one integer N $(1 \leq N \leq 10^6)$ − the size of the array.

Second line will contain N distinct integers $(1 \leq A_i \leq 10^9)$ − the values of the array.

Output
Print the minimum number of ranges you need to represent the given array A.

Examples

input	Copy
10 1 2 3 4 5 6 7 8 9 10	

output	Copy
1	

input	Copy
10 2 4 5 6 8 9 10 11 12 15	

output	Copy
4	

Note
Second test case:

This set of integers can be represented as a union of these four ranges: $[2, 2]$, $[4, 6]$, $[8, 12]$, and $[15, 15]$.