

# Make Distinct

Time limit: 1000 ms

Memory limit: 256 MB

You are given an array of  $N$  integers,  $A$ . An operation involves taking a number from the array and either adding or subtracting 1 from it. What is the minimum number of operations to make  $A$  have only distinct elements.

## Standard input

The first line contains an integer  $N$ .

The second line contains  $N$  elements, representing  $A$ .

## Standard output

Print the answer on the first line.

## Constraints and notes

- $1 \leq N \leq 2 \cdot 10^5$
- $1 \leq A_i \leq N$  for all valid  $i$

Input	Output	Explanation
7 2 3 4 2 2 1 3	7	Transform into 2 4 5 -1 1 0 3 with a cost equal to $(0 + 1 + 1 + 3 + 1 + 1)$ .
4 3 3 3 3	4	Transform into 5 4 3 2.
5 5 4 4 5 4	4	Transform into 6 3 4 5 2.