

E. Misha and Palindrome Degree

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Misha has an array of n integers indexed by integers from 1 to n . Let's define *palindrome degree* of array a as the number of such index pairs (l, r) ($1 \leq l \leq r \leq n$), that the elements from the l -th to the r -th one inclusive can be rearranged in such a way that the **whole** array will be a palindrome. In other words, pair (l, r) should meet the condition that after some rearranging of numbers on positions from l to r , inclusive (it is allowed not to rearrange the numbers at all), for any $1 \leq i \leq n$ following condition holds: $a[i] = a[n - i + 1]$.

Your task is to find the *palindrome degree* of Misha's array.

Input

The first line contains integer n ($1 \leq n \leq 10^5$).

The second line contains n positive integers $a[i]$ ($1 \leq a[i] \leq n$), separated by spaces — the elements of Misha's array.

Output

In a single line print the answer to the problem.

Examples

input
3 2 2 2
output
6
input
6 3 6 5 3 3 5
output
0
input
5 5 5 2 5 2
output
4

Note

In the first sample test any possible pair (l, r) meets the condition.

In the third sample test following pairs $(1, 3)$, $(1, 4)$, $(1, 5)$, $(2, 5)$ meet the condition.