C. Misha and Palindrome Degree

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 $(l, r)(1 \le l \le r \le n)$, 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 $1 \le i \le n$ 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 ($1 \le n \le 10^5$).

The second line contains n positive integers $a[i]$ ($1 \le a[i] \le n$), 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.