

Multiplicative Palindrome

Given a sequence of N integers. Find two disjoint contiguous palindromic subsequences. Let's call them X and Y . Your task is to find X and Y such that product of their lengths is maximal possible.

Input

First line will contain one integer N ($1 \leq N \leq 10^6$).

Second line will contain N integers representing a sequence from the text of the task ($0 \leq A_i \leq 2 \cdot 10^9$).

Output

First and only line of output should contain only one integer, the maximum possible product from the text of problem.

Example

Input:

2
1 1

Output:

1

Input:

4
1 1 2 2

Output:

4

Input:

6
10 11 12 12 11 10

Output:

4

Input:

6
0 1 0 1 0 1

Output:

9