

A. Nearest Minimums

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given an array of n integer numbers a_0, a_1, \dots, a_{n-1} . Find the distance between two closest (nearest) minimums in it. It is guaranteed that in the array a minimum occurs at least two times.

Input

The first line contains positive integer n ($2 \leq n \leq 10^5$) — size of the given array. The second line contains n integers a_0, a_1, \dots, a_{n-1} ($1 \leq a_i \leq 10^9$) — elements of the array. It is guaranteed that in the array a minimum occurs at least two times.

Output

Print the only number — distance between two nearest minimums in the array.

Examples

input
2 3 3
output
1

input
3 5 6 5
output
2

input
9 2 1 3 5 4 1 2 3 1
output
3