

Painting stones

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

You have in front of you n stones, each of which is painted in a color, namely the i -th stone is painted in color a_i .

In one operation, you can choose any two **adjacent** stones and paint them in any same color.

You need all the stones to become the same color with the minimum number of operations.

Input

The first line contains one integer n ($1 \leq n \leq 2 \cdot 10^5$) — the number of stones.

The second line contains n integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq n$) — the colors of the stones.

Output

Output a single number — the minimum number of operations.

Scoring

In this problem, there are conditional blocks. If your solution works correctly for certain constraints, it will receive a certain number of points. Note that the evaluation is still in progress.

1. (32 points): the number of different numbers among all a_i is not more than 2;
2. (33 points): $n \leq 1\,000$;
3. (35 points): without additional constraints.

Example

standard input	standard output
6 1 3 1 5 3 5	3

Note

In the first test, the stones are painted in colors 1, 3, 1, 5, 3, 5 respectively.

For the first operation, you can paint the stones at positions 4, 5 in color 1, after which the stones will be 1, 3, 1, 1, 1, 5.

For the second operation, you can paint the stones at positions 1, 2 in color 1. Now the stones are painted in 1, 1, 1, 1, 1, 5.

For the last operation, you can paint the last two stones in color 1, after which all the stones will be of the same color (1).