

Big Buckets

time limit per test: 5 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

points: 100 · problem code: bigbucket · author: kahootist

You have a list of n numbers, labelled i_1 to i_n , that you're trying to put inside different buckets.

Each bucket can hold any amounts of numbers in it. However, for each bucket, strictly more than half of its content must be identical.

What is the minimum number of buckets needed to pack all n numbers?

Input

Your first line will contain the integer n .

Your next n lines will contain one integer each, which are the numbers waiting to be put inside buckets.

Output

One line, containing the minimum number of buckets needed to pack all n numbers.

Constraints

- $1 \leq n \leq 10^6$
- $1 \leq i_1 \dots i_n \leq 10^6$

Python Template

```
n = map(int, input.split())
numbers = [int(input()) for _ in range(n)]
```

Example 1

Input

```
5
4
7
4
3
2
```

Output

```
3
```

Explanation

In this scenario, the $n = 5$ numbers can be put inside 3 buckets. One possible combination would be `[2]`, `[3]`, `[4, 4, 7]`. Each bucket has strictly more than half of the elements identical to each other.

Example 2

Input

```
8
3
5
12
3
3
5
3
4
```

Output

```
2
```

Explanation

In this scenario, the $n = 8$ numbers can be put inside 2 buckets. One possible combination would be `[3, 3, 3, 4, 12]`, `[3, 5, 5]`.

Example 3

Input

```
9
6
23
6
6
6
6
6
6
6
```

Output

```
1
```

Explanation

In this scenario, all $n = 9$ numbers can be put inside the same bucket.