A. Counting Kangaroos is Fun

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

There are n kangaroos with pockets. Each kangaroo has a size (integer number). A kangaroo can go into another kangaroo's pocket if and only if the size of kangaroo who hold the kangaroo is at least twice as large as the size of kangaroo who is held.

Each kangaroo can hold at most one kangaroo, and the kangaroo who is held by another kangaroo cannot hold any kangaroos.

The kangaroo who is held by another kangaroo cannot be visible from outside. Please, find a plan of holding kangaroos with the minimal number of kangaroos who is visible.

Input

The first line contains a single integer — n ($1 \le n \le 5 \cdot 10^5$). Each of the next n lines contains an integer s_i — the size of the i-th kangaroo ($1 \le s_i \le 10^5$).

Output

Output a single integer — the optimal number of visible kangaroos.

Examples

input
8 2 5 7 6 9 8 4 2
output
5

input
8 9 1 6 2 6 5 8 3
output
5

Codeforces Round #219 (Div. 1)
Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Problem tags

binary search greedy sortings two pointers

No tag edit access

→ Contest materials

- Announcement
- Tutorial