C. Boats Competition

time limit per test: 2 seconds
memory limit per test: 256 megabytes

There are n people who want to participate in a boat competition. The weight of the i-th participant is w_i. Only teams consisting of **two** people can participate in this competition. As an organizer, you think that it's fair to allow only teams with **the same total weight**.

So, if there are k teams (a_1, b_1), (a_2, b_2), $\ldots$, (a_k, b_k), where a_i is the weight of the first participant of the i-th team and b_i is the weight of the second participant of the i-th team, then the condition $a_1 + b_1 = a_2 + b_2 = \cdots = a_k + b_k = s$, where s is the total weight of **each** team, should be satisfied.

Your task is to choose such s that the number of teams people can create is the **maximum** possible. Note that each participant can be in **no more than one** team.

You have to answer t independent test cases.

Input

The first line of the input contains one integer t ($1 \le t \le 1000$) — the number of test cases. Then t test cases follow.

The first line of the test case contains one integer n ($1 \le n \le 50$) — the number of participants. The second line of the test case contains n integers $w_1, w_2, \ldots, w_n$ ($1 \le w_i \le n$), where w_i is the weight of the i-th participant.

Output

For each test case, print one integer k: the **maximum** number of teams people can compose with the total weight s, if you choose s optimally.

Example

input Copy

```
5
5
1 2 3 4 5
8
6 6 6 6 6 6 8 8
8
1 2 2 1 2 1 1 2
3
1 3 3
6
1 1 3 4 2 2
```

output Copy

```
2
3
4
1
2
```

Note

In the first test case of the example, we can reach the optimal answer for $s = 6$. Then the first boat is used by participants 1 and 5 and the second boat is used by participants 2 and 4 (indices are the same as weights).

In the second test case of the example, we can reach the optimal answer for $s = 12$. Then first 6 participants can form 3 pairs.

In the third test case of the example, we can reach the optimal answer for $s = 3$. The answer is 4 because we have 4 participants with weight 1 and 4 participants with weight 2.

In the fourth test case of the example, we can reach the optimal answer for $s = 4$ or $s = 6$.

In the fifth test case of the example, we can reach the optimal answer for $s = 3$. Note that participant with weight 3 can't use the boat because there is no suitable pair for him in the list.

Codeforces Round 661 (Div. 3)
Finished
Practice

→ 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 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

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
228298473	Oct/15/2023 15:56	Accepted
228298296	Oct/15/2023 15:55	Wrong answer on test 2

→ Problem tags

brute force greedy two pointers *1200

No tag edit access

→ Contest materials

- Announcement
- Tutorial