

HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS ROOM STANDINGS CUSTOM INVOCATION

C. Trinity

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

You are given an array a of n elements a_1, a_2, \ldots, a_n .

You can perform the following operation any number (possibly 0) of times:

• Choose two integers i and j, where $1 \leq i, j \leq n$, and assign $a_i := a_j$.

Find the minimum number of operations required to make the array a satisfy the condition:

• For every pairwise distinct triplet of indices (x,y,z) $(1 \le x,y,z \le n, x \ne y, y \ne z, x \ne z)$, there exists a non-degenerate triangle with side lengths a_x , a_y and a_z , i.e. $a_x + a_y > a_z$, $a_y + a_z > a_x$ and $a_z + a_x > a_y$.

Input

Each test consists of multiple test cases. The first line contains a single integer t ($1 < t < 10^4$) — the number of test cases. The description of the test cases follows.

The first line of each test case contains a single integer n ($3 \le n \le 2 \cdot 10^5$) — the number of elements in the array a.

The second line of each test case contains n integers a_1, a_2, \ldots, a_n $(1 \le a_i \le 10^9)$ — the elements of the array a.

It is guaranteed that the sum of n over all test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, output a single integer — the minimum number of operations required.

Example

input	Сору
4	
7	
1 2 3 4 5 6 7	
3	
1 3 2	
3	
4 5 3	
15	
9 3 8 1 6 5 3 8 2 1 4 2 9 4 7	
output	Сору
3	
1	
0	
8	

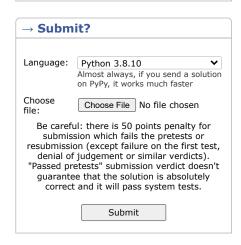
Note

In the first test case, one of the possible series of operations would be:

- Assign $a_1:=a_4=4$. The array will become [4,2,3,4,5,6,7] .
- Assign $a_2:=a_5=5$. The array will become [4,5,3,4,5,6,7] .
- Assign $a_7 := a_1 = 4$. The array will become [4, 5, 3, 4, 5, 6, 4].

It can be proven that any triplet of elements with pairwise distinct indices in the final array forms a non-degenerate triangle, and there is no possible answer using less than 3 operations.

Codeforces Round 983 (Div. 2) Contest is running 00:05:15 Contestant



→ Last submissions			
Submission	Time	Verdict	
289273822	Nov/01/2024 19:15	Wrong answer on pretest 1	

→ Score table		
	Score	
<u>Problem A</u>	274	
<u>Problem B</u>	411	
<u>Problem C</u>	685	
<u>Problem D</u>	959	
<u>Problem E</u>	1233	
<u>Problem F</u>	1644	
Successful hack	100	
Unsuccessful hack	-50	
Unsuccessful submission	-50	
Resubmission	-50	

^{*} If you solve problem on 01:53 from the first attempt

In the second test case, we can assign $a_1 := a_2 = 3$ to make the array a = [3, 3, 2].

In the third test case, since $3,\,4$ and 5 are valid side lengths of a triangle, we don't need to perform any operation to the array.

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