Question 11 **Max. score: 20.00**

Rearrange array

Given, an array of size *N* where *N* is even. Write a program to check if its possible to rearrange the array such that the left half of the array equals to the right half, i.e., if $M = \frac{N}{2}$ then, $a_1 = a_{M+1}$, $a_2 = a_{M+2}$, ... , $a_M = a_N$.

Input format

- The first line of input contains the number of test cases *T*.
- The first line of each test case contains an integer *N*, denoting the number of integers in the array.
- The second line of each test case contains *N* space-separated integers, denoting elements of the array.

Output format

Output YES or NO, required answer for each test case in a new line.

Constraints

$1 \leq T \leq 3$
$2 \leq N \leq 10^5$
$1 \leq A_i \leq 10^6$
N is even

Sample input

```
2
4
5 5 7 7
4
1 2 3 4
```

Sample output

```
YES
NO
```

Explanation

As in first test case one of the permutation of the given array could be $[5, 7, 5, 7]$ which leads to $A_1 = A_3$ and $A_2 = A_4$, so the answer will be YES but in the second test case no permutation of given array will meet the required conditions for array equality hence answer will be NO

Note:

Your code must be able to print the sample output from the provided sample input. However, your code is run against multiple hidden test cases. Therefore, your code must pass these hidden test cases to solve the problem statement.

Limits

Time Limit: 1.0 sec(s) for each input file
Memory Limit: 256 MB
Source Limit: 1024 KB

Scoring