Problem A. Arithmetic Subsequence

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	512 megabytes

Given an integer array $A = [a_1, a_2, \dots, a_n]$ of length n, you need to determine if there exists an integer array $B = [b_1, b_2, \dots, b_n]$ such that the followings hold:

- The array B is a rearrangement of A, i.e., there exists a **permutation** $p = [p_1, p_2, \dots, p_n]$ of size n such that $b_i = a_{p_i}$ for each $1 \le i \le n$.
- The array B doesn't contain any **arithmetic subsequence** of length at least 3.

A sequence $C = [c_1, c_2, \dots, c_k]$ is called an **arithmetic subsequence** of B if and only if the followings are satisfied:

- There exists a sequence of indices $1 \le i_1 < i_2 < \cdots < i_k \le N$, such that $c_j = b_{i_j}$ for each $1 \le j \le k$;
- C forms an arithmetic progression, i.e., for each $1 \le i \le k-2$, we have $c_{i+2} - c_{i+1} = c_{i+1} - c_i$.

Input

The first line contains an integer T $(1 \le T \le 25)$, denoting the number of test cases.

The first line of each test case contains an integer $n (1 \le n \le 5000)$, denoting the size of array A.

The next line contains n integers $a_1, a_2, \dots, a_n (1 \le a_i \le 10^9)$, denoting the elements of array A.

Output

For each test case, if no such array B exists, output “NO”(without quotes) in a line. Otherwise, output “YES”(without quotes) in a line, and in the next line output a valid array B. If there are multiple arrays B that satisfy the requirement, outputting any of them would be considered correct.

Example

standard input	standard output
2 4 3 6 8 9 5 1 1 1 1 1	YES 8 6 9 3 NO