A. Common Subsequence

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

You are given two arrays of integers $a_1,\ldots,a_n$ and $b_1,\ldots,b_m$.

Your task is to find a **non-empty** array $c_1,\ldots,c_k$ that is a subsequence of $a_1,\ldots,a_n$, and also a subsequence of $b_1,\ldots,b_m$. If there are multiple answers, find one of the **smallest** possible length. If there are still multiple of the smallest possible length, find any. If there are no such arrays, you should report about it.

A sequence a is a subsequence of a sequence b if a can be obtained from b by deletion of several (possibly, zero) elements. For example, $[3,1]$ is a subsequence of $[3,2,1]$ and $[4,3,1]$, but not a subsequence of $[1,3,3,7]$ and $[3,10,4]$.

Input

The first line contains a single integer t $(1 \le t \le 1000)$ — the number of test cases. Next $3t$ lines contain descriptions of test cases.

The first line of each test case contains two integers n and m $(1 \le n,m \le 1000)$ — the lengths of the two arrays.

The second line of each test case contains n integers $a_1,\ldots,a_n$ $(1 \le a_i \le 1000)$ — the elements of the first array.

The third line of each test case contains m integers $b_1,\ldots,b_m$ $(1 \le b_i \le 1000)$ — the elements of the second array.

It is guaranteed that the sum of n and the sum of m across all test cases does not exceed 1000 $(\sum_{i=1}^{t} n_i, \sum_{i=1}^{t} m_i \le 1000)$.

Output

For each test case, output "YES" if a solution exists, or "NO" otherwise.

If the answer is "YES", on the next line output an integer k $(1 \le k \le 1000)$ — the length of the array, followed by k integers $c_1,\ldots,c_k$ $(1 \le c_i \le 1000)$ — the elements of the array.

If there are multiple solutions with the smallest possible k, output any.

Example

input
5 4 5 10 8 6 4 1 2 3 4 5 1 1 3 3 1 1 3 2 5 3 1000 2 2 2 3 3 1 5 5 5 1 2 3 4 5 1 2 3 4 5
output
YES 1 4 YES 1 3 NO YES 1 3 YES 1 2

Note

In the first test case, $[4]$ is a subsequence of $[10,8,6,4]$ and $[1,2,3,4,5]$. This array has length 1, it is the smallest possible length of a subsequence of both a and b.

In the third test case, no non-empty subsequences of both $[3]$ and $[2]$ exist, so the answer is "NO".