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 Copy

```
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
```

Codeforces Round #658 (Div. 2)
Finished

→ 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

→ Problem tags

brute force *800

No tag edit access

→ Contest materials

- Announcement (en)
- Tutorial (en)

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

output Copy

```
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".