



Neighbor's Wi-Fi

Farhan is going to participate in an online programming competition. He has been preparing for it since last year, and he can't miss the competition in any way. However, last night, someone cut his broadband cable. So, Farhan will now break into his neighbor's Wi-Fi to get internet access. To figure out the password, he has to solve the following puzzle.

Farhan has discovered two arrays of n integers, A and B . He can do the following operation any number of times:

- Pick three integers l, r and x , such that $1 \leq l \leq x \leq r \leq n$.
- Assign $A[i] = A[x]$ for all $l \leq i \leq r$.

To crack the password, Farhan needs to find a way to transform A to B . And now, he has asked for your help. He will give you n, A, B . You have to say if there's a way, and if yes, also say how to do so.

Input

Each test contains multiple test cases. **The first line of the input contains the number of test cases T .** Then for each of the T test cases, input is given in the following format:

- line 1: n
- line 2: $A[1] A[2] \dots A[n]$
- line 3: $B[1] B[2] \dots B[n]$

Output

For each of test cases, if it is possible to transform A to B using any number of the operation, and you'll output the sequence of operations to achieve it, output in the following format:

- line 1: YES K
- line $1 + i$ ($1 \leq i \leq K$): $L[i] R[i] X[i]$; values of l, r and x for the i th operation

If it is possible, but you won't output the sequence of operations, output the following:

- line 1: YES -1

If it is not possible to transform, output the following:

- line 1: NO

Constraints

Let N be the sum of n over all test cases.

- $1 \leq T \leq 2 \cdot 10^5$
- $1 \leq n \leq N \leq 2 \cdot 10^5$
- $1 \leq A[i], B[i] \leq 10^9$ for all $1 \leq i \leq n$

Subtasks

Subtask	Score	Additional constraints
1	10	$n = 2$ and $T \leq 500$
2	15	$B[i] = B[i + 1]$ for all $1 \leq i < n$
3	15	There's at most one $1 \leq i < n$ such that $B[i] \neq B[i + 1]$
4	25	$n \leq N \leq 2000$
5	35	No additional constraints

Scoring

- If you choose not to print the sequence of operations for any test case but provide the correct answer, you will receive 60% of the subtask's score.
- If you choose to print the sequence, but it is incorrect, you will receive 0 points for that subtask.
- Otherwise, you will receive full score for the subtask.

Examples

Example 1

```
2
2
23 42
23 42
4
69 96 143 10
96 69 10 10
```

The partially correct output is:

```
YES -1  
NO
```

The correct output is:

```
YES 0  
NO
```

Note that other valid sequences of operations can exist.

Example 2

```
1  
3  
1 2 3  
1 1 2
```

The partially correct output is:

```
YES -1
```

A correct output is:

```
YES 2  
2 3 2  
1 2 1
```

Note that other valid sequences of operations can exist.