LCS Revisited

HackerRank

Problem Statement

You have to find the Longest common subsequence of 3 given arrays. Each array is size N. (Find the maximum size of the array, which is a subsequence of each given array.)

All array numbers are generated randomly. In other words, each number is taken with equal probability from 1 to N.

For example, if N is 5,then, for each number, there is a 20% probability that it's "1", also 20% that it's "2", 20% that it's "3", 20% that it's "4" and 20% that it's "5".

Input Format

The first line contains one number, T, which is the number of tests.
For each test: The next line contains N, and the following 3 lines will contain 3 arrays. Each array is the size of N.

Constraints

$1 \leq T \leq 5$
For 40% score $1 \leq N \leq 500$
For 100% score $1 \leq N \leq 3000$

For all of the testcases, the array elements will be an integer between 1 and N.

Output Format

For each test, print the length of the longest common subsequence.

Sample Input

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

Sample Output

```
1
2
```

Explanation

In the first test case, LCS is {2} and, in the second test case, LCS is {3,2}.