

02 : 03 : 26
HRS MIN SEC

August Easy '21

LIVE

Aug 07, 2021, 09:30 AM IST - Aug 07, 2021, 12:30 PM IST

INSTRUCTIONS

PROBLEMS

SUBMISSIONS

LEADERBOARD

ANALYTICS

JUDGE

[← Problems](#) / Select the subset

Select the subset

Max. score: 100

You are given an array A and B of size N .

You must select a subset of indices from 1 to N such that for any pair of indices (x, y) , $x \neq y$ in the subset one of the following conditions holds true:

- $A[x] < A[y]$ and $B[x] < B[y]$
- $A[x] > A[y]$ and $B[x] > B[y]$
- $A[x] = A[y]$ and $B[x] \neq B[y]$

Your task is to determine the largest possible size of a subset that satisfies the provided conditions.

Note: Assume 1 based indexing.

Input format

- The first line contains an integer T that denotes the number of test cases.
- For each test case:
 - The first line contains an integer N .
 - The second line contains N space-separated integers that denotes the array A .
 - The third line contains N space-separated integers that denotes the array B .

Output format

For each test case, print the largest possible size of a subset that satisfies the provided conditions in a new line.

Constraints

$$1 \leq T \leq 10$$

$$2 \leq N \leq 10^5$$

$$1 \leq A[i], B[i] \leq 10^9$$

SAMPLE INPUT



```
1
5
10 21 5 1 3
3 1 4 23 56
```

SAMPLE OUTPUT



2

Explanation

- Choose index **4, 5** in the subset.
 - (**4, 5**) satisfies $A[x] < A[y]$ and $B[x] < B[y]$
 - (**5, 4**) satisfies $A[x] > A[y]$ and $B[x] > B[y]$.
- Thus, largest possible size of a subset which satisfies the above conditions is **2**.

Time Limit: 1.0 sec(s) for each input file.**Memory Limit:** 256 MB**Source Limit:** 1024 KB**Marking Scheme:** Score is assigned if any testcase passes.**Allowed Languages:** Bash, C, C++, C++14, C++17, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, Java 14, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, Python 3.8, Racket, Ruby, Rust, Scala, Swift-4.1, Swift, TypeScript, Visual Basic

CODE EDITOR

Save

C (gcc 5.4.0)



```
1  /*
2  // Sample code to perform I/O:
3  #include <stdio.h>
4
5  int main(){
6      int num;
7      scanf("%d", &num);                // Reading input from STDIN
8      printf("Input number is %d.\n", num); // Writing output to STDOUT
9  }
10
11 // Warning: Printing unwanted or ill-formatted data to output will cause
12 // the test cases to fail
13
14 // Write your code here
15
```

1:1 vscode

☒ Provide custom input

COMPILE & TEST

SUBMIT

 **Tip:** You can submit any number of times you want. Your best submission is considered for computing total score.Your Rating: [Tweet](#) [View all comments](#)**Resources**

Tech Recruitment Blog

Product Guides

Developer hiring guide

Engineering Blog

Developers Blog

Developers Wiki

Competitive
ProgrammingStart a Programming
ClubPractice Machine
Learning**Solutions**

Assess Developers

Conduct Remote
Interviews

Assess University Talent

Organize Hackathons

**CompanyService &
Support**

About Us

Press

Careers

Technical Support

Contact Us

+1-650-461-4192

contact@hackerearth.com

