

4_火氣很大的競賽人(Fiery Contestants)

(15分)

時間限制: 1 second

記憶體限制: 256 MB

題目敘述

有 N 個火氣很大的競賽人，編號 $1, 2, \dots, N$ ，由左而右排成一排。

這 N 個人都有在玩鳴神和原潮兩款遊戲，競賽人 i 在鳴神的遊戲等級是 a_i ，在原潮的遊戲等級是 b_i 。

這些競賽人有一個討厭的毛病，那就是他們會看遊戲等級嘲諷人。一個競賽人的鳴神和原潮遊戲等級如果都大於等於他向右看第一個競賽人的鳴神和原潮遊戲等級，那他會嘲諷向右看的第一個競賽人。如果一個競賽人右邊沒有其他人，那他不會嘲諷任何人。注意到每個競賽人只會在乎在他右邊的第一個競賽人，不會去嘲諷更右邊的人。

你的任務是把一些人從排隊隊伍中移除，使得留在隊伍中的人不會嘲諷別人，並最大化留下來的人數。

輸入格式

第一行輸入一個正整數 T ，代表子測試資料的個數。

每一筆子測試資料會輸入三行。

第一行輸入一個正整數 N ，代表競賽人人數。

第二行輸入 N 個正整數 a_1, a_2, \dots, a_N ，代表 N 個競賽人在鳴神的遊戲等級。

第三行輸入 N 個正整數 b_1, b_2, \dots, b_N ，代表 N 個競賽人在原潮的遊戲等級。

輸出格式

資料範圍

- $1 \leq T \leq 10000$
- $1 \leq N \leq 3 \times 10^5$
- 保證 N 的總和不超過 3×10^5
- $1 \leq a_i \leq 10^9$
- $1 \leq b_i \leq 10^9$

測試範例

輸入範例 1

```
3
3
1 2 3
6 5 4
5
1 3 1 2 3
2 2 1 3 1
5
1 1 1 1 1
5 4 3 2 1
```

輸出範例 1

```
3
4
1
```

範例說明

第一個子測試資料中，所有人都能留下來。

第二個子測試資料中，可以只移除競賽人 3。

第三個子測試資料中，不可能留下超過一個人，但可以留下任何一個人。

4_Fiery Contestants

(15 points)

Time Limit: 1 second

Memory Limit: 256MB

Statement

There are N fiery contestants, numbered $1, 2, \dots, N$, standing in a line from left to right.

Each of these N contestants plays two games: Wuthering Shin and Gen Waves. Contestant i is level a_i in Wuthering Shin and level b_i in Gen Waves.

These contestants have an annoying habit of taunting others based on their game levels. If a contestant's levels in both Wuthering Shin and Gen Waves are **greater than or equal to** the levels of the first contestant to his right, he will taunt that first contestant to his right. If a contestant has no one to his right, he will not taunt anyone. Note that each contestant only cares about the first contestant to his right and will not taunt anyone further to the right.

Your task is to remove some contestants from the line so that no one remaining will taunt anyone else, while maximizing the number of contestants left in the line.

Input Format

The first line contains a positive integer T , representing the number of test cases.

Each test case consists of three lines:

The first line contains a positive integer N , representing the number of contestants.

The second line contains N positive integers a_1, a_2, \dots, a_N , representing the Wuthering Shin levels of the contestants.

The third line contains N positive integers b_1, b_2, \dots, b_N , representing the Gen Waves levels of the contestants.

Output Format

For each test case, output a single line containing the maximum number of contestants that can remain without any taunting occurring.

Constraints

- $1 \leq T \leq 10000$
- $1 \leq N \leq 3 \times 10^5$
- The sum of N over all test cases does not exceed 3×10^5
- $1 \leq a_i \leq 10^9$
- $1 \leq b_i \leq 10^9$

Test Cases

Input 1

```
3
3
1 2 3
6 5 4
5
1 3 1 2 3
2 2 1 3 1
5
1 1 1 1 1
5 4 3 2 1
```

Output 1

```
3
4
1
```

Illustrations

For the first test case, all contestants can stay without any taunting.

For the second test case, only contestant 3 needs to be removed.

For the third test case, it's impossible to keep more than one contestant, but any one contestant can be kept.