



Interval Selection

by HackerRank

Problem

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Given a set of n intervals, find the size of its largest possible subset of intervals such that no three intervals in the subset share a common point.

Input Format

The first line contains an integer, s , denoting the number of interval sets you must find answers for. The $s \cdot (n + 1)$ subsequent lines describe each of the s interval sets as follows:

1. The first line contains an integer, n , denoting the number of intervals in the list.
2. Each line i of the n subsequent lines contains two space-separated integers describing the respective starting (a_i) and ending (b_i) boundaries of an interval.

Constraints

- $1 \leq s \leq 100$
- $2 \leq n \leq 1000$
- $1 \leq a_i \leq b_i \leq 10^9$

Output Format

For each of the s interval sets, print an integer denoting the size of the largest possible subset of intervals in the given set such that no three points in the subset overlap.

Sample Input

```
4
3
1 2
2 3
2 4
3
1 5
1 5
1 5
4
1 10
1 3
4 6
7 10
4
1 10
1 3
3 6
7 10
```

Sample Output

```
2
2
```

4
3

Explanation

For set s_0 , all three intervals fall on point **2** so we can only choose any **2** of the intervals. Thus, we print **2** on a new line.

For set s_1 , all three intervals span the range from **1** to **5** so we can only choose any **2** of them. Thus, we print **2** on a new line.

For set s_2 , we can choose all **4** intervals without having more than two of them overlap at any given point. Thus, we print **4** on a new line.

For set s_3 , the intervals **[1, 10]**, **[1, 3]**, and **[3, 6]** all overlap at point **3**, so we must only choose **2** of these intervals to combine with the last interval, **[7, 10]**, for a total of **3** qualifying intervals. Thus, we print **3** on a new line.

[f](#) [t](#) [in](#)Submissions: [1200](#)

Max Score: 65

Difficulty: Medium

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Java 7



```
1 /* Sample program illustrating input and output */
2
3 import java.util.*;
4
5 class Solution{
6     public static void main( String args[] ){
7
8         // helpers for input/output
9         Scanner in = new Scanner(System.in);
10
11         int test;
12         test = in.nextInt();
13
14         for(int t=0; t<test; t++){
15
16             int N;
17             N = in.nextInt();
18
19             int A[] = new int[N];
20             int B[] = new int[N];
21
22             for(int i=0; i<N; i++){
23                 A[i] = in.nextInt();
24                 B[i] = in.nextInt();
25             }
26
27             int result = 0;
28             System.out.println( result );
29
30         }
31     }
32 }
33
```

Line: 1 Col: 1

 [Upload Code as File](#)☐ Test against custom input

Run Code

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