

Interval Selection



Problem Statement

You are given a list of N intervals.

The challenge is to select the largest subset of intervals, such that, no three intervals in the subset share a common point.

Input:

The first line contains the number of cases, T . Then T cases follow. Each case contains the number N on the first line followed by N lines containing integers a_i and b_i . The i th line denotes the starting and ending points of the i^{th} interval.

Output:

Output T lines, one for each test case, containing the desired answer for the corresponding test case.

Constraints:

$$1 \leq T \leq 100$$

$$2 \leq N \leq 1000$$

$$1 \leq a_i \leq b_i \leq 1000000000 (10^9)$$

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 the first case and second, the largest subset can contain any two intervals, but not all three.

For the third case, the largest subset contains all the given intervals. For last case, we can select last 3 intervals.