Interval Selection

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.