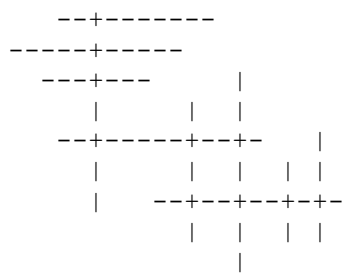
Problem: Cow Steeplechase

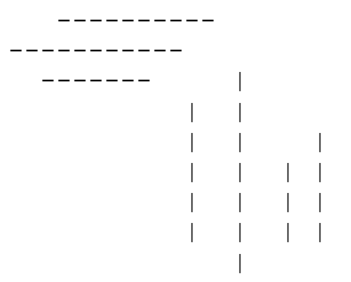
Farmer John has a brilliant idea for the next great spectator sport: Cow Steeplechase! As everyone knows, regular steeplechase involves a group of horses that race around a course filled with obstacles they must jump over. FJ figures the same contest should work with highly-trained cows, as long as the obstacles are made short enough.

In order to design his course, FJ makes a diagram of all the N (1 <= N <=250) possible obstacles he could potentially build. Each one is represented by a line segment in the 2D plane that is parallel to the horizontal or vertical axis. Obstacle i has distinct endpoints (X1_i, Y1_i) and (X2_i, Y2_i) (1 <= X1_i, Y1_i, X2_i, Y2_i <= 1,000,000,000).

An example is as follows:



FJ would like to build as many of these obstacles as possible, subject to the constraint that no two of them intersect. Starting with the diagram above, FJ can build 7 obstacles:



Two segments are said to intersect if they share any point in common, even an endpoint of one or both of the segments. FJ is certain that no two horizontal segments in the original input diagram will intersect, and that similarly no two vertical segments in the input diagram will intersect. Please help FJ determine the maximum number of obstacles he can build.

INPUT FORMAT

The first line will contain a single positive integer, C ($C \leq 10$), representing the number of test cases in the input. The test cases follow. The first line of each test case includes a positive integer, N ($N \leq 250$), representing the number of obstacles for that test case. The following N lines of the test case contain 4 space-separated integers X_{1i}, Y_{1i}, X_{2i}, and Y_{2i}, representing the end points of the i^{th} obstacle.

SAMPLE INPUT

```
2
3
4 5 10 5
6 2 6 12
8 3 8 5
2
1 2 1 10
4 5 10 5
```

INPUT DETAILS

There are three potential obstacles. The first is a horizontal segment connecting (4, 5) to (10, 5); the second and third are vertical segments connecting (6, 2) to (6, 12) and (8, 3) to (8, 5). In the second input case, we have two non-intersecting segments.

OUTPUT FORMAT

For each test case, output a single integer on a line representing the maximum number of obstacles that can be placed without intersection for that test case.

SAMPLE OUTPUT

```
2
2
```

OUTPUT DETAILS

In the first case, we choose both vertical segments. In the second case, we take both segments included in the input.