

Save the World

The dark lord **Sauron** uses **orcs** as his tools to do evil deeds across the middle earth. The **orcs** resides deep inside earth. **Sauron** has made certain holes for them to come out on his command. **Gandalf** wants to save the earth, so he tries to block the holes.

Gandalf has got wooden planks of variable length and unit width, the holes are unit squares. He plans to use planks to cover the holes, but there is a limitation, he must **NOT** cover the part of earth where there is no hole. Planks can overlap each other.

Assume the world to be a grid of infinite length and breadth. Calculate the minimum number of planks that must be used so that all holes are covered, given the infinite supply of planks of all lengths.

Input (STDIN):

The first line of each test file contains the number of test cases(T). Second line contains the number of holes through which orcs can come out(N). Each of the next N lines contains two integers X and Y, which are the co-ordinate of holes in the grid.

Output (STDOUT):

For each test case output a single integer i.e. minimum number of planks needed to cover all the holes.

Constraints:

$1 \leq T \leq 100$

$1 \leq N \leq 2000$

$0 \leq X, Y \leq 50$

(**Note:** there may be duplicate entries for a single hole)

Time Limit:

2 sec

Sample Input

```
1
10
0 0
0 2
1 1
1 2
1 3
2 0
1 2
2 1
2 2
3 2
```

Sample Output

```
4
```

Explanation:

Plank 1 covers the hole number 1

Plank 2 is vertically placed and runs from (0,2) to (3,2)

Plank 3 is horizontally placed and runs from (1,1) to (1,3)

Plank 4 is also horizontally placed and runs from (2,0) to (2,2)

Composer:

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