Plane compression method

Cost: 12 | Solved: 13

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

You are given ***N*** rectangles with vertexes at points with integer coordinates and sides parallel to axis *x* and axis *y*.

You have to find the maximal number of crossing rectangles.

Keep in mind that rectangles also cross if they have coincident vertexes.

Input:

The first line contains a natural ***N*** ($1 \le N \le 10^5$) **–** the quantity of rectangles.

Coordinates of rectangles' vertexes are given in the next ***N*2*** lines. For each rectangle the first line contains coordinates of lower-left vertex, the second **–** of upper-right vertex ($-1000 \le x, y \le 1000$).

Keep in mind that a line segment and a point are also a rectangle.

Output:

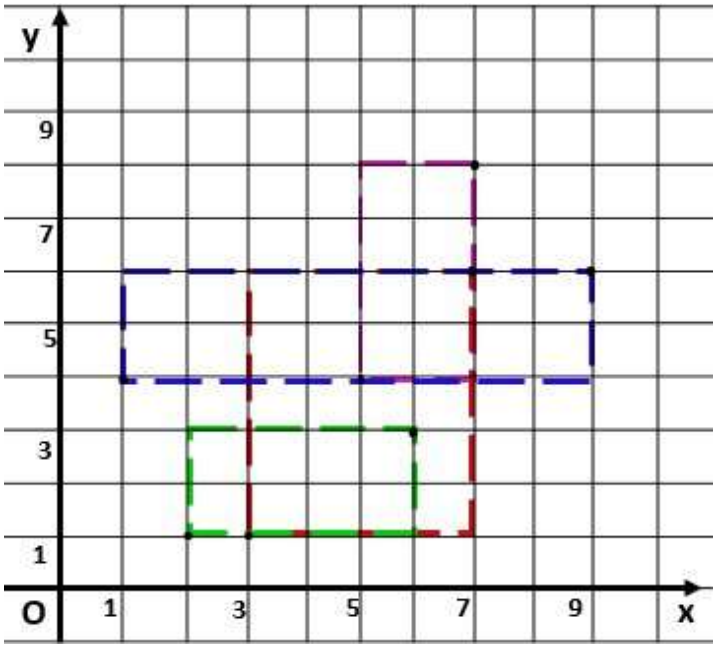
The maximal number of crossing rectangles**.**

Example:

Input	Output

2 1 1 2 2 3 3 4 4	0
2 1 1 2 2 1 1 2 2	2
4 1 4 9 6 2 1 6 3 3 1 7 6 5 4 7 8	3

An example:



The maximal amount of crossing rectangles here is 3 (the red, blue and violet).