

Southeastern European Regional Programming Contest Bucharest, Romania October 21, 2000

Problem F Rectangles

Input File: F.DAT

Program Source File: F.PAS or F.C or F.CPP

A specialist in VLSI design testing must decide if there are some components that cover each other for a given design. A component is represented as a rectangle. Assume that each rectangle is rectilinearly oriented (sides parallel to the x and y axis), so that the representation of a rectangle consists of its minimum and maximum x and y coordinates.

Write a program that counts the rectangles that are entirely covered by another rectangle.

The input file contains the text description of several sets of rectangles. The specification of a set consists of the number of rectangles in the set and the list of rectangles given by the minimum and maximum x and y coordinates separated by white spaces, in the format:

```
\label{eq:nr_rectangles} \begin{split} & \text{nr}_{\text{rectangles}} \\ & \text{xmin}_{1} \text{ xmax}_{1} \text{ ymin}_{1} \text{ ymax}_{1} \\ & \text{xmin}_{2} \text{ xmax}_{2} \text{ ymin}_{2} \text{ ymax}_{2} \\ & \dots \\ & \text{xmin}_{n} \text{ xmax}_{n} \text{ ymin}_{n} \text{ ymax}_{n} \end{split}
```

The output should be printed on the standard output. For each given input data set, print one integer number in a single line that gives the result (the number of rectangles that are covered). An example is given in Figure 1.

input	output
3	0
100 101 100 101	4
0 3 0 101	
20 40 10 400	
4	
10 20 10 20	
10 20 10 20	
10 20 10 20	
10 20 10 20	

Figure 1