2043 Rectangles

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.

Input

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:

$nr\_rectangles$
$xmin_1\ xmax_1\ ymin_1\ ymax_1$
$xmin_2\ xmax_2\ ymin_2\ ymax_2$
...
$xmin_n\ xmax_n\ ymin_n\ ymax_n$

Output

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).

Sample Input

```
3
100 101 100 101
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
```

Sample Output

```
0
4
```