Problem F
Abstract Painting
Time Limit: 1 second

Ollie is an artist and she draws abstract paintings. Her very new picture looks like a straight line with multiple line segments in many colours.

She painted it by following this order: First, she drew a segment of the first color from l_1 to r_1, then a segment of the second color from l_2 to r_2, and so on. Finally, she drew the last segment from l_n to r_n with the n^{th} color..

All segments were of n different colors, however, some might be painted over by others. Then Ollie thought: perhaps if she painted these segments in same place but in a different order, the number of visible colors in the picture will be maximum.

Your task is to help her to choose the order of drawing these segments so that the number of visible colors in the picture will be maximized. Line segments are considered closed.

Input

The first line contains an integer n $(1 \leq n \leq 300)$.

The i^{th} line in the next n lines contains two integers l_i and r_i $(-10^9 \leq l_i < r_i \leq 10^9)$ which indicate the i^{th} drawn with the i^{th} color.

Output

In the first line, output the number of colors that will be visible in the optimal drawing order.

Sample Input	Sample Output
4 1 3 2 4 2 3 1 4	3