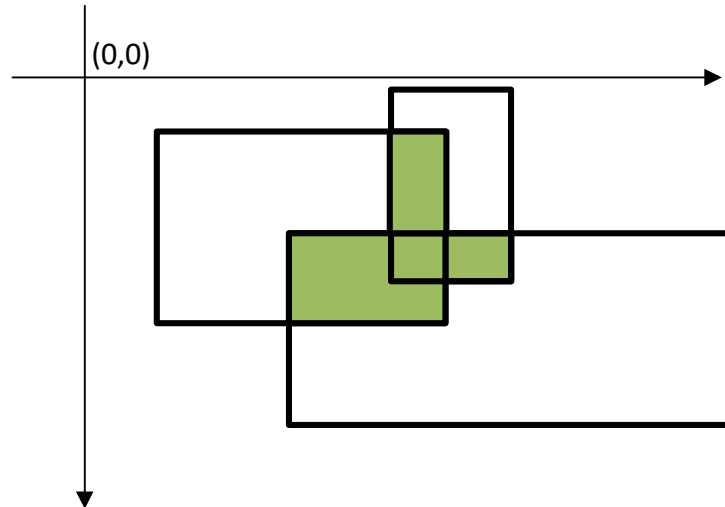# B. Intersection Areas of Rectangles

Time Limit: 3 seconds

Problem description

Given a set of N axis-oriented rectangles, calculate the intersection area between rectangles. The below figure illustrates axis-oriented rectangles and their intersections. The rectangle is represented by top-left corner coordinates, width, and height.

Input:

First line contains N – the number of rectangles to compute

N next lines are rectangles information. Line i^{th} is related to the information of rectangle i^{th} in the format of x, y, width and height separated by space.

Output:

A real number represents the area of intersection section.

See some sample test cases.

Test Case	INPUT	OUTPUT	Description
1	2 1 1 100 75 1 200 50 50	0.0	No intersection
2	2 1 1 100 75 50 25 100 150	2601.0	1 intersection

3	3 1 1 100 75 50 25 100 150 30 40 200 30	3201.0	
4	4 1 1 200 200 350 1 200 200 30 40 400 30 30 150 400 30	15060.0	