Problem: Area of rectangles

time limit=1 second.

Given n rectangles in the plane, find the area of the union of all rectangles.

Format:

The first line is the number of test cases. The first line of each test case is n, n<=20000, and each of the following n lines is the data of a rectangle. Each rectangle is given by four nonnegative integers x1,y1,x2,y2, where (x1,y1) and (x2,y2) are two opposite corners of the rectangle. The coordinates are at most 120000, and separated by a space.