

## 223. Rectangle Area

Difficulty **Medium**

156

350

Discuss

Favorite

Share

Description

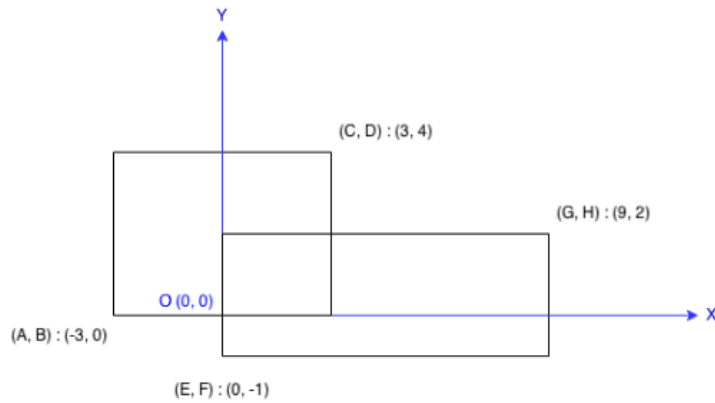
Hints

Solution

Submissions

Find the total area covered by two **rectilinear** rectangles in a **2D** plane.

Each rectangle is defined by its bottom left corner and top right corner as shown in the figure.



**Example:**

**Input:**  $A = -3, B = 0, C = 3, D = 4, E = 0, F = -1, G = 9, H = 2$

**Output:** 45

**Note:**

Assume that the total area is never beyond the maximum possible value of **int**.

```
public class L223 {
    /*
     * 这是求两个矩形面积的和，首先尝试找出所有的不相交的情况，只有四种：一个矩形在另一个的上下左右四个位置不重叠
     * 这四种情况下返回两个矩形面积之和。其他所有情况下两个矩形是有交集的，这时候我们只要算出长和宽，即可求出交集区域
     * 的大小，然后从两个巨型面积之和中减去交集面积就是最终答案。
     */

    public int computeArea(int A, int B, int C, int D, int E, int F, int G, int H) {

        int sum = (C - A) * (D - B) + (H - F) * (G - E);
        if(E >= C || F >= D || B >= H || A >= G)
            return sum;
        return sum - ((Math.min(G, C) - Math.max(A, E)) * (Math.min(D, H) - Math.max(B, F)));
    }
}
```