1. Rectangle Area

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.

Rectangle Area

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**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**.

**解**

计算公式为：S = 矩形1的面积 + 矩形2的面积 - 相交部分的面积

相交的宽 = 矩形1的宽 + 矩形2的宽 - 实际图形的宽

相交的高计算类似

如果相交部分的高或者宽小于0，说明没有相交

题目原本定义的int会溢出？？？？？？？

typedef long long int LL;  
class Solution {  
public:  
 LL computeArea(LL A, LL B, LL C, LL D, LL E, LL F, LL G, LL H) {  
 LL S = (C-A)\*(D-B) + (G-E)\*(H-F);  
 LL d = abs(C - A) + abs(G - E) - abs(max(G, C) - min(A, E));  
 LL h = abs(D - B) + abs(H - F) - abs(max(D, H) - min(F, B));  
 return S - (d > 0 && h > 0 ? d \* h : 0);  
 }  
};