Problem 223: Rectangle Area

Problem Information

Difficulty: Medium
Acceptance Rate: 48.40%
Paid Only: No
Tags: Math, Geometry

Problem Description

Given the coordinates of two **rectilinear** rectangles in a 2D plane, return _the total area covered by the two rectangles_.

The first rectangle is defined by its **bottom-left** corner `(ax1, ay1)` and its **top-right** corner `(ax2, ay2)`.

The second rectangle is defined by its **bottom-left** corner `(bx1, by1)` and its **top-right** corner `(bx2, by2)`.

Example 1:

![Rectangle Area](https://assets.leetcode.com/uploads/2021/05/08/rectangle- plane.png)

Input: ax1 = -3, ay1 = 0, ax2 = 3, ay2 = 4, bx1 = 0, by1 = -1, bx2 = 9, by2 = 2 **Output:** 45

Example 2:

Input: ax1 = -2, ay1 = -2, ax2 = 2, ay2 = 2, bx1 = -2, by1 = -2, bx2 = 2, by2 = 2 **Output:** 16

Constraints:

* `-104 <= ax1 <= ax2 <= 104` * `-104 <= ay1 <= ay2 <= 104` * `-104 <= bx1 <= bx2 <= 104` * `-104 <= by1 <= by2 <= 104`

Code Snippets

C++:

```
class Solution {
public:
int computeArea(int ax1, int ay1, int ax2, int ay2, int bx1, int by1, int
bx2, int by2) {

}
};
```

Java:

```
class Solution {
public int computeArea(int ax1, int ay1, int ax2, int ay2, int bx1, int by1,
int bx2, int by2) {

}
}
```

Python3:

```
class Solution:
def computeArea(self, ax1: int, ay1: int, ax2: int, ay2: int, bx1: int, by1:
int, bx2: int, by2: int) -> int:
```