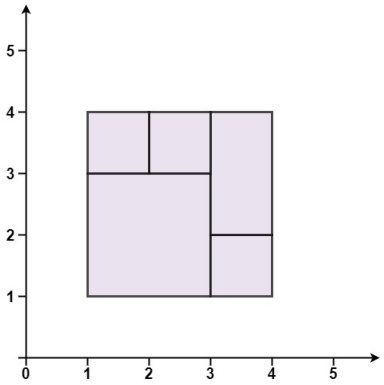
391. Perfect Rectangle

Given an array rectangles where rectangles[i] = [x_i, y_i, a_i, b_i] represents an axis-aligned rectangle. The bottom-left point of the rectangle is (x_i, y_i) and the top-right point of it is (a_i, b_i).

Return true if all the rectangles together form an exact cover of a rectangular region.

Example 1:

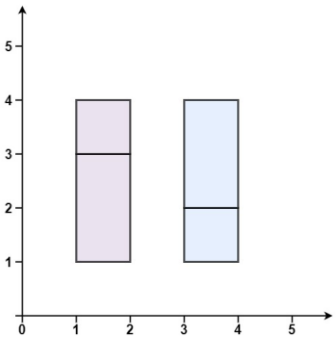


Input: rectangles = [[1,1,3,3],[3,1,4,2],[3,2,4,4],[1,3,2,4],[2,3,3,4]]

Output: true

Explanation: All 5 rectangles together form an exact cover of a rectangular region.

Example 2:

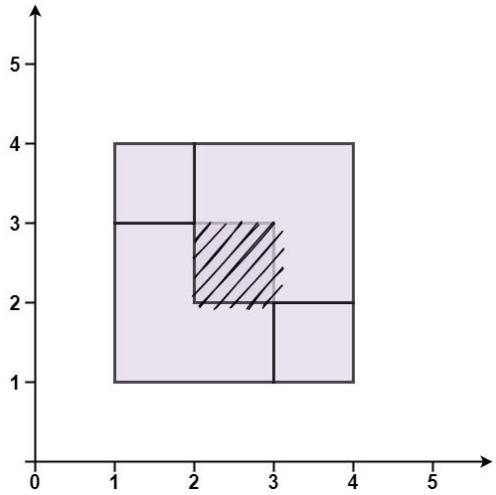


Input: rectangles = [[1,1,2,3],[1,3,2,4],[3,1,4,2],[3,2,4,4]]

Output: false

Explanation: Because there is a gap between the two rectangular regions.

Example 3:



Input: rectangles = [[1,1,3,3],[3,1,4,2],[1,3,2,4],[2,2,4,4]]

Output: false

Explanation: Because two of the rectangles overlap with each other.

Constraints:

- $1 <= rectangles.length <= 2 * 10^4$
- rectangles[i].length == 4
- $-10^5 <= x_i < a_i <= 10^5$
- $-10^5 <= y_i < b_i <= 10^5$