*Place N smaller rectangles into one $n \times m$ rectangle without overlaps*

*Variables:* $\{r_{00}, r_{01}, \ldots, r_{10}, \ldots, r_{mn}\}$

*Values:* $\{1, 2, \ldots, N, blocked\}$

*Constraints:*

*— each variable is either the left upper corner of a rectangle or*

*the part that a rectangle blocks*

*— every rectangle has to be contained*

*—when a variable is an upper left corner, all remaining squares*

*of the rectangle — when aligned horizontally or vertically —*

*will block aligned squares in the respective orientation*


*Place N smaller rectangles into one $n \times m$ rectangle without overlaps*

*Variables:* $\{r_0, r_1, \ldots, r_N\}$

*Values:* $\{(R_{00}, v), (R_{01}, v), \ldots, (R_{10}, v), \ldots, (R_{nm}, v), (R_{00}, h), \ldots\}$

*Constraints:*

*—when a rectangle is oriented vertiaclly, its width and height are swapped*

*—the upper left corner of each triangle is placed on a coordinate in the larger*

*grid while making sure that the rectangle won't overextend the large one's boundary*

*— every rectangle has to be contained*

*—each rectangles position has to be either left of others by the amount of their own width*

*or above them by the amount of their own height*

*—each rectangles position has to be either to the right of others by the amount of the other's width*

*or below it by their height*