**Input format:**

The first line of the input contains two integers M and N indicating the number of rows and columns of trees in the forest. The following M lines have N integers each. The jth integer on line i + 1 denotes the volume (in cubic feet) of the jth tree on the ith row. Line M + 2 contains a single integer C indicating the number of rectangles for which the total volume is to be computed. Each of the following C lines (line M + 2 + 1 ...M +2+C) each contain four integers x1, y1, x2 and y2 (with x1...x2 and y1 . . . y2) and describes a rectangle. The rectangle has its top left corner at the tree in position (x1, y1) and its bottom right corner at the tree at position (x2, y2).

**Output format:**

Your output must contain C lines with one integer on each line. Line i must contain the total volume of wood in the rectangle described on line M +2+i in the input.

**Note:**

Bad inputs include the following cases:

1. For negative indices or zero indices

[x1, x2, y1, y2 should not be negative or zero]

1. If any index of given top-left point (x1 or y1) is greater than bottom-right point (x2 or y2)

[x1 should not be greater than x2 and y1 should not be greater than y2]

1. If any index exceeds the row or column number

[x1 or x2 should be not be greater than row value and y1 or y2 should be not be greater than column value]

then the program will output a statement saying “Wrong Input plot points!”.

1. If the value ‘C’ is:

a) negative- the program will output a statement saying “Wrong Input!”.

b) zero- the program will not output anything even if the plot points are given later.