

C. Non-Overlapping Area

time limit per test: **1 second**

memory limit per test: **256 megabytes**

input: **C.inp**

output: **C.out**

Given the coordinates of the lower-left and upper-right points of two rectangles A and B. Calculate the area of the non-overlapping areas of the two rectangles knowing that the sides of the two rectangles parallel to the two coordinate axes.

Input

There are 2 lines follow

Each line contains 4 integers x_1, y_1, x_2, y_2 .

x_1, y_1 are the lower-left points of the rectangles

x_2, y_2 are the upper-right points of the rectangles

$-10^6 \leq x_1 < x_2 \leq 10^6$.

$-10^6 \leq y_1 < y_2 \leq 10^6$.

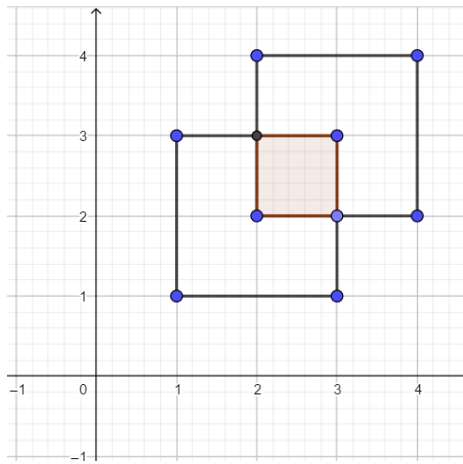
Output

The area of the non-overlapping areas of the two rectangles knowing that the sides of the two rectangles parallel to the two coordinate axes

Example

input
1 1 3 3
2 2 4 4
output
6

Note



The non-overlapping area is 6.