Problem B. Perfect gift

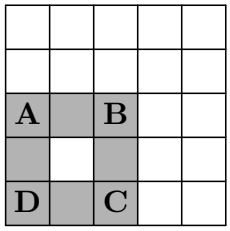
Input file:	`input.txt`
Output file:	`output.txt`
Time limit:	2 seconds
Memory limit:	256 MiB

Taja prepares a present for the birthday. As you might know, the best present is the one handcrafted by yourself. Recently she learnt cross-stitching and decided to make use of this skill.

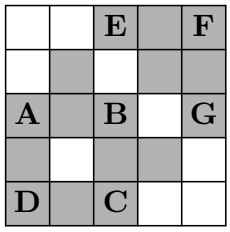
At home she only managed to find a canvas, which already had two crosses stitched on it. Don't panic — you can always complement it to the full picture. She had little experience, that's why she chose simple but nevertheless beautiful picture, which is parallelepiped. She wants to finish the present as soon as possible, thus number of new cross-stitches should be **the least possible**.

Parallelepiped on the **infinite** grid is drawn like this.

Let's draw a rectangle $ABCD$ with its upper left corner at A and lower right corner at C.



Then draw segments of equal length towards up-right from A, B and C — with ends at E, F, G correspondingly. Then add segments EF and FG.



All edges of the parallelepiped should be **at least** 3 **cells** long.

Input

First line of the input contains two integers x_1 and y_1 — coordinates of the first cross-stitch. Second line contains coordinates of second cross: x_2, y_2. Coordinates of the first cross-stitches are different. Axis OX is directed from left to right, and axis OY — from the bottom to the top. All numbers are within range $[0, 10^9]$.

Output

Output should contain single number — **the least** amount of required cross-stitches.

Examples

input.txt	output.txt
4 2 9 3	17
0 0 1 1	14

Explanation

This pictures correspond to the samples: