CMPUT 274 - Tangible Computing
Morning Problem: Bed

Description

Noah has decided to purchase a new bed for his new house; he is moving out in December!.

Noah wants to make sure the bed is big enough before he buys it so that he'll be able to sleep comfortably on it. Thankfully, Noah can shape-shift and is only worried about the area of the bed - the height and width don't matter as long as the area is large enough.

Assuming the bed is placed on a two dimensional plane and is oriented such that two sides are parallel to the y-axis and the other two sides are parallel to the x-axis, find the area of the bed given two opposite points (you may also assume the bed is perfectly rectangular).

See the figure below for an illustration of the first sample input.

Input

There are two lines of input, each containing the x and y values of a corner of the bed. You are guaranteed the two points given are opposite corners of the bed. The x and y values on a line will be separated by a single space.

All numbers in the input are integers lying between $-1,000$ and $1,000$. The two x values are distinct as are the two y values.

Output

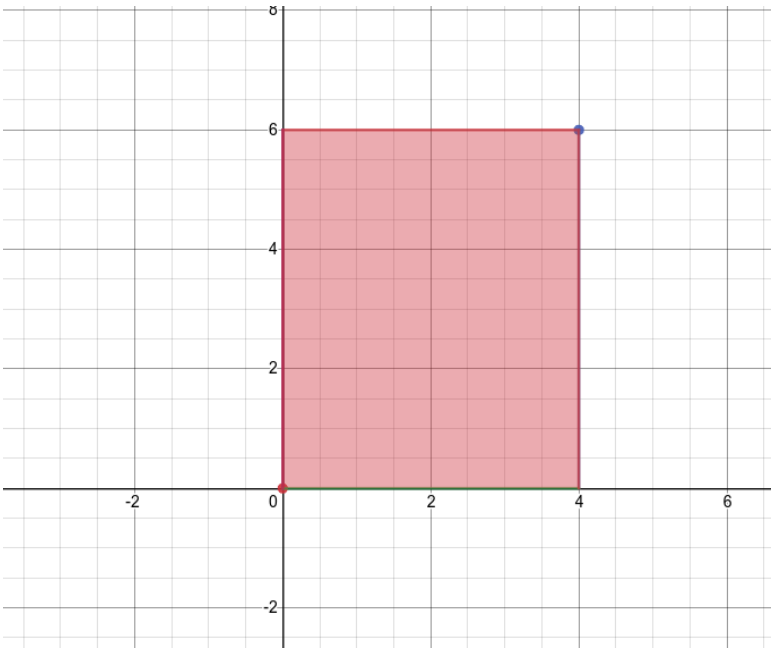
Print a single line containing the area of the bed (as an integer).

Sample Input 1

```
0 0
4 6
```

Sample Output 1

```
24
```



Sample Input 2

```
-4 -2
6 9
```

Sample Output 2

```
110
```