CMPUT 274 - Tangible Computing **Fall 2019**
Morning Problem: Rectangle Corners

Description

A rectangle in the Cartesian plane (i.e. standard (x, y) coordinate system) is said to be **axis-parallel** if two edges (the "top" and "bottom") are parallel with the x-axis and the other two edges (the "left" and "right") are parallel with the y-axis.

An axis-parallel rectangle can be uniquely determined by providing the coordinates of two diagonally-opposite corners. You are given more: the coordinates of three corners of the rectangle.

Input

The input will be three lines, each containing two integers x, y separated by a space giving the coordinates of one of the corners of the rectangle. Every value will be an integer between -10^9 and 10^9.

You are guaranteed these lines will describe three corners of a rectangle that has positive width and positive height.

Output

Your program should output one line consisting of two integers x, y giving the remaining corner of the rectangle. These should be separated by a single space.

Sample Input 1

```
0 0
0 1
1 0
```

Sample Output 1

```
1 1
```

Explanation: Given these three points, the fourth corner of the rectangle must be at 1,1. Try sketching this example if the reason why is unclear.

Sample Input 2

```
3 14
7 12
7 14
```

Sample Output 2

```
3 12
```

Explanation: Given these three points, the fourth corner of the rectangle must be at 3,12.

Sample Input 3

```
10 10
4 5
10 5
```

Sample Output 3

```
4 10
```

Explanation: The fourth corner of the rectangle is at 4,10.