# Problem D
## Was it IN?
### Time limit: 1 second

The Autumn Festival has started, and those who stand inside the hot zone during the event can participate in the Festival Lottery and win a chance to stand on the podium!

The T-shaped hot zone consists of a horizontal strip and a vertical half-strip. You are given the coordinates of the strips and your current location, represented as a point in the plane. Your task is to determine whether or not you are in the hot zone!

Note that, points on the boundary of the strips are considered inside the hot zone.

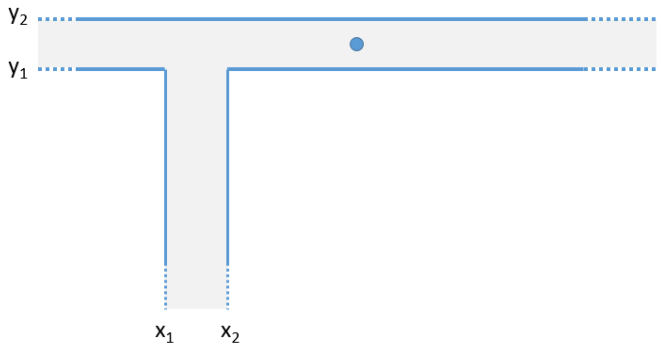



Figure 1: The left part of the figure shows an example with a hozontal strip that spans from $y_1 = 0$ to $y_2 = 2$ and a vertical half-strip that anchors at $y_1$ and spans from $x_1 = 4$ to $x_2 = 6$. The input point locates at $(7, 1)$. So your program should output "IN" in a line, as the right part of the figure shows.

## Input Format

There will be multiple test cases in the input file, separated by a blank line.

Each test case starts with four integers $y_1, y_2, x_1, x_2$, which are the y-coordinates of the lower-boundary and the upper-boundary of the horizontal strip and the x-coordinates of the vertical strip, respectively. The second line of the test case contains two integers $x$ and $y$, which are your current location.

A test case with $y_1 = y_2 = x_1 = x_2 = 0$ indicates the end of the input.

You may additionally assume the following.

- $y_1 \leq y_2$, $x_1 \leq x_2$.
- The absolute value of all coordinates does not exceed $10^9$.

## Output Format

For each test case, print "IN" in a line if you are in the hot zone. Otherwise, print "OUT" in a line.

## Sample Input

```
0 2 4 6
7 1

0 2 4 6
7 -1

0 0 0 0
```

## Output for the Sample Input

```
IN
OUT
```