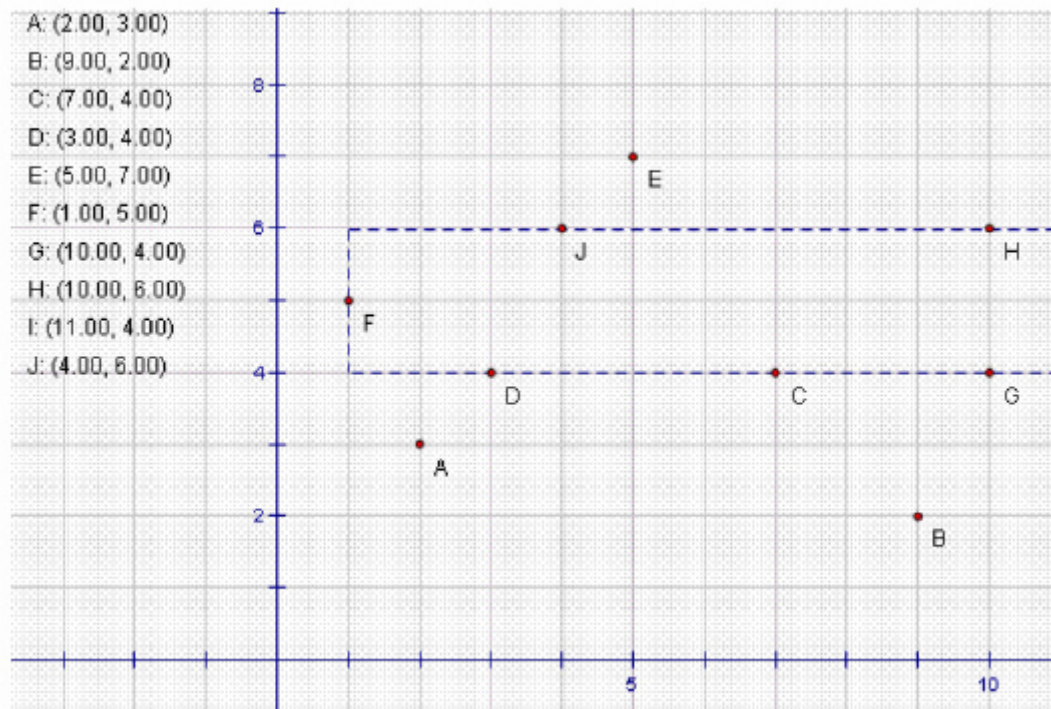


## 3695 Distant Galaxy

You are observing a distant galaxy using a telescope above the Astronomy Tower, and you think that a rectangle drawn in that galaxy whose edges are parallel to coordinate axes and contain maximum star systems on its edges has a great deal to do with the mysteries of universe. However you do not have the laptop with you, thus you have written the coordinates of all star systems down on a piece of paper and decide to work out the result later. Can you finish this task?



### Input

There are multiple test cases in the input file. Each test case starts with one integer  $N$ , ( $1 \leq N \leq 100$ ), the number of star systems on the telescope.  $N$  lines follow, each line consists of two integers: the  $X$  and  $Y$  coordinates of the  $K$ -th planet system. The absolute value of any coordinate is no more than  $10^9$ , and you can assume that the planets are arbitrarily distributed in the universe.

$N = 0$  indicates the end of input file and should not be processed by your program.

### Output

For each test case, output the maximum value you have found on a single line in the format as indicated in the sample output.

### Sample Input

```
10
2 3
9 2
9 2
7 4
```

```
3 4
5 7
1 5
10 4
10 6
11 4
4 6
0
```

### Sample Output

Case 1: 7