

# Sicrano

Sicrano has a problem ... a geometry problem. He is not a very good in this area, so he's asking for your help.

Given a set of points and a set of segments, tell, for each segment, how much points lie in it.

## Input

The first integer  $T$  ( $T \leq 20$ ) in the input says that there are  $T$  test cases in the input. Each test case begins with two integer  $N$  and  $M$  ( $1 \leq N, M \leq 50$ ).  $N$  means how many points exists in that test case, and  $M$  means how many segments exists in that test case. The next  $N$  pairs of integers represents the points. Each pair describes the coordinates  $x$  and  $y$  of a point. ( $0 \leq x, y \leq 100$ ). After that, the segments will be listed. Each segment is described by the coordinates of its two extreme points. All values in the input are integers. See the sample input for clarification.

## Output

For each segment, print how many points are in it.

## Example

**Input:**

```
1
4 3
1 1
2 2
3 3
4 4

0 0 5 5
3 3 4 4
0 0 1 0
```

**Output:**

```
4
2
0
```