Description | My Submissions | Hints/Editorial | AC Submissions | My Notes (0)

Collisions

? Ask Doubt

Time-Limit: 1 sec Score: 100.00/100 Difficulty :

Memory: 256 MB Accepted Submissions: 100 Relevant For: AZ-201

Description

There are *N* balls on the *X*-axis and *M* balls on the *Y*-axis. At the time, *t=0*, each ball on *X*-axis is thrown parallel to the *Y*-axis in the positive *Y* direction. Similarly, each ball on *Y*-axis is thrown parallel to the *X*-axis in the positive *X* direction. At any time, if two balls collide, they disappear. A collision can only happen between the ball thrown from *X*-axis and the ball thrown from *Y*-axis. **No two balls from *X*-axis or *Y*-axis can collide.** A ball can take part in at max one collision. You have to find the total number of collisions.

Input Format

The first line of the input contains one integer *T* - the number of test cases. Then *T* test cases follow.
The first line of each test case contains two space-separated integers *N* and *M* - the number of balls on the *X*-axis and *Y*-axis respectively.
For each test case, *N* lines follow. The *i*-th of the line contains two space-separated integers X_i and U_i, the position and speed of the *i*-th ball respectively.
For each test case, *M* lines follow. The *i*-th of the line contains two space-separated integers Y_i and V_i, the position and speed of the *i*-th ball respectively.

Output Format

For each test case, print the number of collisions on a separate line.

Constraints

$1 \le T \le 100$
$1 \le N, M \le 10^5$
$1 \le X_i, U_i, Y_i, V_i \le 10^9$

Sample Input 1

Copy

```
3
1 1
1 3
3 1
2 1
1 4
1 3
4 1
2 3
1 2
2 3
1 6
2 1
```

C++14[GCC]

Submit

```
1
```