

## Problem 5 - Boxes (Programming - Basic)

### Description

(20%) You received  $n$  boxes as a new semester gift from your best friends. The size of box  $i$  is  $w_i \times h_i \times 1$ . Since  $n$  may be very large, you want to save space by putting one box into another box. Note that you can rotate boxes freely, and box  $x$  can be put into box  $y$  if and only if there is a rotation such that each side of box  $x$  is smaller than or equal to the corresponding side of box  $y$ .

For example, you can put a  $1 \times 3 \times 1$  box into a  $3 \times 2 \times 1$  box, but you cannot put a  $5 \times 7 \times 1$  box into a  $6 \times 6 \times 1$  box. Now you are curious about how many ordered pairs of boxes  $(x, y)$  such that box  $x$  can be put into box  $y$ .

### Input Format

The first line contains an integer  $T$  indicating the number of test cases. Each test case starts with a line containing one integer  $n$ , specifying the number of boxes. Each of the following  $n$  lines contains two integers  $w_i$  and  $h_i$  specifying the size of box  $i$ .

- $1 \leq T \leq 10$
- $1 \leq n \leq 100000$
- $1 \leq w_i, h_i \leq 10^9$

### Output Format

For each test case, please output the number of ordered pairs  $(x, y)$  such that box  $x$  can be put into box  $y$ . Note that this number could be very large, do not forget to use `long long` and `%lld` in `printf`.

### Sample Input

```
2
2
1 2
1 2
4
1 3
3 2
5 7
6 6
```

### Sample Output

```
2
5
```