3115 - Square Toys

Description

Tom has a pair of toys like those in green and blue in the following picture:

Both toys have exactly the same number 1 <= N <= 1000 of consecutive piles of 1x1 square units (with at least 1 square on each pile). The toys are aligned with coordinate axis, and the blue toy is supported (resting) above the green toy, being as close as possible to the ground where the green toy is supported.

You must note that at least two piles should be touching for this problem; in a perfect configuration of the toys perhaps all piles are touching. But Tom is not a smart boy then almost always he leave some empty spaces: those which you can see between toys.

Initial configurations are given. Can you find the amount of empty spaces which

should be between toys when they meet?

Input specification

The first line contains an integer number 1 <= T <= 250 representing the number of test cases. For each case the first line contains an integer number 1 <= N <= 1000 representing the amount of piles in the toys. The next N lines contains a pair of space-separated integer numbers between 1 and 100 representing the amount of squares in the i-th (1 <= i <= N) pile for the blue and green toy respectively.

Output specification

For each case you must print a line with an integer number: the amount of empty spaces which should be between toys when they meet.

Sample input

```
3
3
7 2
4 5
1 8
6
2 1
1 1
1 2
2 1
1 1
1 2
8
2 2
```

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

Sample output

```
0
2
6
```

Hint(s)

Source	Yonny Mondelo Hernández
Added by	**ymondelo20**
Addition date	2015-02-17
Time limit (ms)	3000
Test limit (ms)	1000
Memory limit (kb)	150000000
Output limit (mb)	64
Size limit (bytes)	15000
Enabled languages	Bash C C# C++ C++11 Java JavaScript-NodeJS Pascal Perl PHP Prolog Python Ruby Text