

2376 - I2P(I) 2021_Chen_final

[Scoreboard \(/contest/scoreboard/2376/\)](/contest/scoreboard/2376/)

Time

2021/06/22 18:40:00

02:41:21

2021/06/22 21:40:00

Clarification

#	Problem	Asker	Description	Reply	Replier	Reply Time	For all team

Overview

Problem ▾

13225 - Guard The Wall - ver2

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Description

I shall take no wife, hold no lands, father no children.

~ by anonymous loser.

The night's watch needs to guard The Wall.

But they're lack of resource. They can only choose $q-3$ men from q men to guard The Wall.

Help them find the maximum number of section they can protect.

There're n sections in a line numbered from 1 to n .

There're q soldiers, for i -th soldier, he can guard from section L_i to $R_i (1 \leq i \leq q)$

A section is guarded if **at least one** soldier guard the section.

You can only hire $q-3$ soldiers.

You need to find the **maximum** number of sections that can be guarded by hiring $q-3$ soldiers from q soldiers.

Example

If you got $n = 4$ sections and $q = 4$ soldiers.

First soldier guard $L_1 = 1, R_1 = 1$.

Second soldier guard $L_2 = 2, R_2 = 2$.

Third soldier guard $L_3 = 3, R_3 = 4$.

Forth soldier guard $L_3 = 4, R_3 = 4$.

You can hire $q-3 = 1$ soldier.

The best solution is hired the third soldier then you got 2 section guarded.

The answer will be 2.

When you got TLE at testcase 6
for 3 times.



Input

The input first contains one integer t ($1 \leq t \leq 5$) which means the number of testcases.

Each testcase first contains two numbers n, q ($4 \leq n, q \leq 300$).

Then the following q lines, each line contains two integer L_i, R_i ($1 \leq L_i \leq R_i \leq n$)

Output

For each testcase print a integer which means the **maximum** number of sections that can be guarded by hiring $q-3$ soldiers.

Remember to print `\n` at the end of each output.

Sample Input

[Download \(data:text/plain;charset=utf-8,3%0D%0A4%204%0D%0A1%201%0D%0A2%202%0D%0A3%204%0D%0A4%204%0D%0A4%204%0D%0A1%201%0D%0A](#)

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

Sample Output

[Download \(data:text/plain;charset=utf-8,2%0D%0A1%0D%0A4%0D%0A\)](#)

```
2
1
4
```

Discuss