

# Black Widow Rings

Black Widow has a collection of  $N$  (numbered 1 to  $N$ ) Rings. She uses the rings to attack the enemies. She has decided to use one ring for distraction. She will first throw the distraction ring and then all the other rings will be thrown through it (one at a time). Each ring has an inner and outer radius.

A ring  $R_1$  will pass through ring  $R_2$  only if the outer radius of  $R_1$  is less than the inner radius of  $R_2$ .

If she can choose a distraction ring from the given collection print the index of the ring (1-based), else print -1.

## Input

The first line of the input contains an integer  $T$  denoting the number of test cases.

The first line of each test case contains a single integer  $N$  denoting the number of Rings.

Next  $N$  lines consist of Inner and Outer Radius of the  $i$ th Ring -  $r$ ,  $R$ .

- $1 \leq T \leq 100$
- $2 \leq N \leq 1000$
- $1 \leq r < R \leq 10^7$

(Edited:  $r$  and  $R$  are integer)

## Output

For each test case print the desired result in separate line.

## Example

Input:

```
2
3
2 3
6 8
3 5
3
4 5
5 8
3 10
```

Output:

```
2
-1
```