Problem J
Pedestrian Bridges

Source file: `bridges.{c | cpp | java}`
Input file: `bridges.in`

The city is planning to introduce pedestrian bridges instead of regular crosswalks. This will help achieve smoother traffic and increase the safety for pedestrians. The project will start with the busiest crosswalks to replace them with pedestrian bridges. The city needs your help to find out which crosswalks are the busiest.

You will be given details of how many pedestrians cross a specific crosswalk, the times of their arrival, and how long they take to cross. Your task is to calculate the maximum number of pedestrians on the crosswalk at any point of time. A pedestrian is considered on the crosswalk from the time they arrive until the time they leave the crosswalk inclusive.

Input

The input starts with a number T ($0 < T < 1{,}000$) that represents the number of test cases in the file. Each test case starts with a line containing an integer N ($0 < N \leq 100{,}000$) representing the number of pedestrians for a specific crosswalk. ***N*** lines follow each containing two integers X_i and T_i ($0 \leq X_i, T_i \leq 10^9$) representing the time of arrival, and the amount of time needed to cross for pedestrian ***i,*** respectively. Pedestrians' arrival times will be given in non-decreasing order.

Output

The output for each test case is in this form:

```
k. ans
```

where ***k*** represents the test case number (starting at 1), and ***ans*** is the maximum number of pedestrians on the crosswalk at any point of time.

Sample Input

```
2
4
1 20
2 10
3 5
5 10
5
1 2
3 3
4 3
5 3
30 5
```

Output for Sample Input

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