

Collect more, Get more

Time Limit : 1s

Xin is playing a game named 'Collect more, Get more', where he is supposed to collect some resource in the game. The game consists of some tiers. Everytime he reaches a new tier, he can claim the bonus resource from that tier. The bonus resource is included in total collected amount as a requirement to reach the next tier.

Currently, Xin has 0 resource and he wants to reach the highest tier available. He needs to know how much resource he needs to collect excluding bonus resource from every tier. Each bonus resource can be claimed once. The total resource collected including bonus resource is still counted for next tier. For example when he collects 1000, he gets free 500 bonus, so he has 1500 in total and he needs 500 to reach 2000 (see sample input).

Format Input

First line is a integer T ($1 \leq T \leq 100$), the number of cases. For each testcase, there will be a integer N ($1 \leq N \leq 20$) representing the number of tiers. The next N line consist of two integer A_i, B_i ($1000 \leq A_i \leq 10^6$; $0 \leq B_i \leq 10^6$; $A_i < A_{i+1}$) where A_i the ammount needed for tier i and B_i is the ammount bonus.

Format Output

For each testcase, output "Case #X: Y" (without quotes) in a line where X is the case number (starts from 1) and Y denotes the minimum ammount resources that Xin needed to collect.

Sample Input

```
2
5
1000 500
2000 1000
5000 2000
10000 2500
30000 10000
1
10000 10000
```

Sample Output

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Case #1: 24000
Case #2: 10000
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