Our beloved sultan is back again, and he is really excited. He will be celebrating his 2nd year anniversary next month. He is arranging a feast for that. But that is where, he is facing some problems.

He is holding a grand feast, and every guest can bring any number of guests. And there guests can also bring their guests and so on. The problem is, he doesnt like everyone, and dislike many of the guests. So, he decided, he wont be inviting every one.

He has assigned a 'like' value to everyone in his guest list. If like value is positive, then he likes them, negative if he dislikes, and zero if neither.

Now, sultan wants to invite his friends in such a way that would maximize the sum of 'like' value of all guests.

Input

First line contains T, the number of test cases. Each test case starts with an integer N, the number of people in the guest list. The following N lines each starts with two integers, l_i and r_i. l_i is the 'like' value of the i-th person, and r_i is the number of people he likes to invite. Rest of the line contains r_i integers, the other guests i-th guest likes to invite. All guests are numbered from 1 to N. There is a blank line before each test case.

Output

For each test case, output the case number followed by the maximum 'like' value, or print '`Alas, sultan can't invite anyone!`' if its not possible to invite anyone. Sultan can invite, as long as the sum is non negative.

Constraints

- $T \leq 100$
- $N \leq 100$
- $-10000 \leq l_i \leq 10000$, for all $i = 1, 2, \ldots, N$
- $1 \leq r_i \leq N - 1$
- In the friend list, no person is listed twice, and all numbers in the list are between 1 and N.

Sample Input

```
3

5
8 2 2 4
-9 1 5
7 1 4
0 1 5
-10 0

4
10 2 2 4
-2 1 4
12 1 4
-10 0

5
10 1 2
-12 1 3
2 1 5
12 1 5
-10 0
```

Sample Output

```
Case #1: Alas, sultan can't invite anyone!
Case #2: 10
Case #3: 4
```