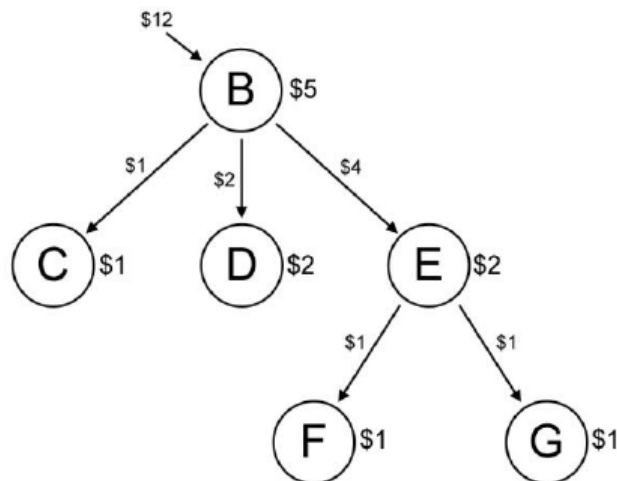


## 7714 Pay Day

BLACK is a (hypothetically) well-known fast growing criminal organization in Indonesia. It is “fast growing” because they employed multi-level marketing strategy in expanding their shady business. Specifically, each member may recruit other candidate who has not yet become a member to be his direct subordinate. Therefore, its organization structure resembles a rooted tree with Mr. Black (the founder) as the root.

Each month, BLACK managed to make  $M$  dollars (note that Indonesian currency is rupiah, but we will use the term “dollar” in this problem to simplify things, like cutting of the zeroes). All those monies without a doubt go to Mr. Black at first. Then Mr. Black distributes those monies with the following scheme: first, he took some portion of the monies for himself (at least 1 dollar), and distributes the remaining to all his **direct** subordinates such that no monies are wasted. Each member of BLACK also adopts Mr. Black’s distribution scheme. All members should ensure all his subordinates, direct or indirect, get at least 1 dollar; otherwise, they risk an uprising. As there are no members who fond of cent (they only want dollar), Mr. Black should ensure each member gets an integer amount of money, i.e. in whole dollar.

For example, let Mr. Black (B) has 3 direct subordinates (C, D, and E), and E has 2 subordinates (F and G). Supposed the monies BLACK made in a certain month is \$12. Following figure is one possible distribution.



In this example, B (Mr. Black) takes 5 dollars for himself and distributes the remaining 7 dollars to all his direct subordinates where C gets 1 dollar, D gets 2 dollars, and E gets 4 dollars. As E has two subordinates, he takes 2 dollars for himself and distributes the remaining 2 dollars, each 1 dollar to each of his subordinate.

Your task in this problem is to determine how many possible ways to distributes  $M$  dollars in BLACK organization following Mr. Black’s scheme, and *modulo* the output by 1,000,000,007.

### Input

The first line of input contains an integer  $T$  ( $T \leq 1,000$ ) denoting the number of cases. Each case begins with two integers:  $N$  and  $M$  ( $1 \leq N \leq 1,000$ ;  $1 \leq M \leq 1,000,000$ ) in a line denoting the number of members in BLACK organization and the total money earned in a month. All members are numbered from 1 to  $N$  with Mr. Black being number 1. The next  $N$  lines each begins with an integer

$C_i$  denoting the number of direct subordinate of the  $i$ -th member for  $i = 1..N$  in order. Each line is followed by  $C_i$  integers denoting his respective direct subordinate ID.

### Output

For each case, output 'Case # $X$ :  $Y$ ' (without quotes) in a line where  $X$  is the case number (starts from 1), and  $Y$  is the total number of ways to distribute the monies in BLACK organization following Mr. Black's scheme for that particular case, modulo  $Y$  with 1,000,000,007.

### Sample Input

```
4
6 12
3 2 3 4
0
0
2 5 6
0
0
1 100
0
2 100
1 2
0
3 5
1 2
1 3
0
```

### Sample Output

```
Case #1: 462
Case #2: 1
Case #3: 99
Case #4: 6
```