In this problem you will need to find out which task has the most number of dependencies. A task A depends on another task B if B is a direct or indirect dependency of A.

For example, if A depends on B and B depends on C, then A has two dependencies, one direct and one indirect.

You can assume there will be no cyclic dependencies in the input.

Input

The input consists of a set of scenarios. Each scenario begins with one integer N, $0 < N \leq 100$, in a line indicating how many tasks this scenario contains. Then there will be N lines, one for each task. Each line will contain an integer $0 \leq T \leq N - 1$, the number of direct dependencies of that task, plus T integers, the identifiers of that dependencies. Tasks are numbered from 1 to N.

The input ends with a scenario where $N = 0$.

Output

For each scenario, print the number of the task with the greatest number of dependencies alone in a line. If there are ties, show the task with the lowest identifier.

Sample Input

```
3
1 2
1 3
0
4
2 2 4
0
2 2 4
0
0
```

Sample Output

```
1
1
```