Problem C - Too Many Tickets

You and your friends are planning to play a massive game of hide and seek on the new directed (acyclic) train network of France (problem B). You and your friends are the seekers and looking for one person hiding in some single city. Two of the seekers are not allowed to visit the same city and they can only follow directed edges. Seekers can choose their own starting city, but can only travel between two cities over a directed train track. With these conditions, what is the smallest number of seekers that are necessary?

Input

The input consists of:

- one line with one integer n ($1 \leq n \leq 1000$), where n is the number of cities.
- n lines, each containing one integer k, followed by k integers with the destination cities.

Take care that indices of cities start at 0.

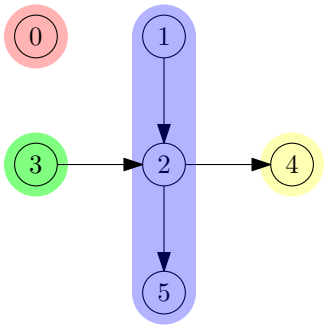

Figure 1: (Sample Input 2) You need one friend to search city 0, and since two seekers are not allowed to visit the same city you need three of them for the remainder of the graph.

Output

Output one integer representing the smallest possible number of friends that you need.

Sample Input 1	**Sample Output 1**
4 1 1 1 2 0 1 1	2

Sample Input 2	**Sample Output 2**
6 0 1 2 2 4 5 1 2 0 0	4