

# Romantically Involved

## Problem Statement

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In the second year of the university somebody started a study on the romantic relations between the rabbits. The relation "romantically involved" is defined between one female rabbit and one male rabbit. For the study reasons it is necessary to find out the maximum set satisfying the condition: there are no two rabbits in the set who have been "romantically involved". The result of the program is the number of rabbits in such a set.

## Input

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The input contains several data sets in text format. Each data set represents one set of subjects of the study, with the following description:

**the number of rabbits**

**the description of each rabbit, in the following format**

**rabbit\_identifier:(number\_of\_romantic\_relations) rabbit\_identifier1**

**rabbit\_identifier2 rabbit\_identifier3 ...**

**or**

**rabbit\_identifier:(0)**

The rabbit\_identifier is an integer number between 0 and n-1 ( $n \leq 500$ ), for n subjects.

## Output

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For each given data set, the program should write to standard output a line containing the result.

## Sample

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Input	Output
7	5
0: (3) 4 5 6	2
1: (2) 4 6	
2: (0)	
3: (0)	
4: (2) 0 1	
5: (1) 0	
6: (2) 0 1	
3	
0: (2) 1 2	
1: (1) 0	
2: (1) 0	