Permutation Cycles

Problem Description

There are several ways to represent a permutation consisted of the n integers from 1 to n. For example, when a permutation of 8 integers is (3,2,7,8,1,4,5,6), one way to represent it as an array is $\begin{pmatrix} 12345678 \\ 32781456 \end{pmatrix}$. Another way to represent it in cycle-arrow form is shown in Figure 1.
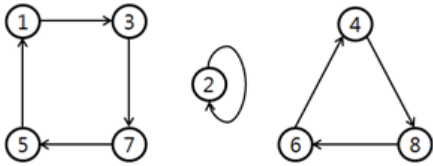

Figure 1.

If we represent a permutation as an array $\begin{pmatrix} 1 \ldots i \ldots n \\ \pi_1 \ldots \pi_i \ldots \pi_n \end{pmatrix}$ then there is a directed edge from i to π_i in its corresponding cycle-arrow form for each i.

As shown in Figure 1, there are 3 cycles when we represent permutation (3,2,7,8,1,4,5,6) in cycle-arrow form. We call these cycles 'permutation cycles.'

You are to write a program which counts the number of permutation cycles in a given permutation of n integers.

Input

The input file name is `cycle.inp`. The input consists of T test cases. The number of test cases T is given in the first line of the input. Each test case starts with a line containing an integer $n(2 \le n \le 1,000)$. In the following line there is a permutation of the n integers from 1 to n. Each integer in a permutation is separated by a blank.

Output

The output file name is `cycle.out`. Print exactly one line for each test case. The line should contain the number of permutation cycles in the given permutation.

Sample Input	Output for the Sample Input
2 8 3 2 7 8 1 4 5 6 10 2 1 3 4 5 6 7 9 10 8	3 7