

THE ARMY

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Points: 100

Time constraint: 1 s
Memory constraint: 32 MB

Manny is a high ranking official in the country of Cleptomania. His role is completely ceremonial and all he does is receive high ranking officials of other countries.

Manny is the commander in chief of the Cleptomainan army, which consists of exactly **N** soldiers, and has decided to prepare a choreography for the upcoming GNJ8 meeting.

Manny has written down the first **N** positive integers, each of which appears exactly once. Manny lines up the soldiers left to right. Then the soldiers wait to form a new line.

Then, Manny starts reading the numbers in order, left to right, the way they are written on the paper. After Manny reads a number, the soldier who was in the corresponding position leaves and stands on the position which Manny read.

After reading all the numbers, Manny checks to see if the soldiers have already been in that formation. If so, Manny stops reading the numbers.

Input data

The first line gives **N**, and the second line gives a sequence consisting of the first **N** positive integers.

For 80% of the cases **N** ≤ 100

For an additional 10% **N** ≤ 1 000

For an additional 10% **N** ≤ 100 000

Output data

The first and only line of the output tells how many times Manny will read the numbers on the paper.

Sample data

INPUT :

4
1 4 3 2

OUTPUT :

2

INPUT :

4
1 2 3 4

OUTPUT :

4

INPUT :

3
2 3 1

OUTPUT :

1

Notices:**Explanation for the first sample data**

Initially the formation of the soldiers is: 1, 4, 3, 2.

After the first callout their formation is: 2, 1, 4, 3

After the second callout their formation is: 1, 2, 3, 4

Explanation for the first sample data

Initially the formation of the soldiers is: 1, 2, 3, 4

After the first callout their formation is: 4, 1, 2, 3

After the second callout their formation is: 3, 4, 1, 2

After the third callout their formation is: 2, 3, 4, 1

After the fourth callout their formation is: 1, 2, 3, 4