

Contest Duration: 2025-12-13(Sat) 23:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251213T2100&p1=248>) - 2025-12-14(Sun) 00:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251213T2240&p1=248>) (local time) (100 minutes)

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E - Minimum Swap

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 475 points

Problem Statement

You are given an integer sequence $P = (P_1, P_2, \dots, P_N)$ that is a permutation of $(1, 2, \dots, N)$. Here, it is guaranteed that P is not equal to $(1, 2, \dots, N)$.

You want to perform the following operation zero or more times to make P match the sequence $(1, 2, \dots, N)$:

- Choose a pair of integers (i, j) satisfying $1 \leq i < j \leq N$. Swap the values of P_i and P_j .

Let K be the minimum number of operations required to make P match the sequence $(1, 2, \dots, N)$.

Find the number of operations that can be **the first operation** in a sequence of operations that makes P match the sequence $(1, 2, \dots, N)$ in K operations. Two operations are distinguished if and only if the chosen pairs of integers (i, j) are different.

Constraints

- $2 \leq N \leq 3 \times 10^5$
- $1 \leq P_i \leq N$ ($1 \leq i \leq N$)
- $P_i \neq P_j$ ($1 \leq i < j \leq N$)
- There exists $1 \leq i \leq N$ such that $i \neq P_i$.

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- All input values are integers.

Input

The input is given from Standard Input in the following format:

```
N
P1 P2 ... PN
```

Output

Print the answer.

Sample Input 1

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```
5
3 1 4 2 5
```

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Sample Output 1

[Copy](#)

```
6
```

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For example, the goal can be achieved in three operations as follows:

- Choose $(i, j) = (1, 2)$. P becomes $(1, 3, 4, 2, 5)$.
- Choose $(i, j) = (2, 4)$. P becomes $(1, 2, 4, 3, 5)$.
- Choose $(i, j) = (3, 4)$. P becomes $(1, 2, 3, 4, 5)$.

The goal cannot be achieved in two or fewer operations, so $K = 3$.

As explained above, choosing $(1, 2)$ for the first operation allows the goal to be achieved in three operations. Additionally, if one of $(1, 3)$, $(1, 4)$, $(2, 3)$, $(2, 4)$, $(3, 4)$ is chosen for the first operation, then by performing the next two operations appropriately, P can be made equal to $(1, 2, 3, 4, 5)$.

Therefore, print 6.

Sample Input 2

[Copy](#)

```
2
2 1
```

Sample Output 2

[Copy](#)

```
1
```

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Sample Input 3

[Copy](#)

```
20
15 5 13 17 9 11 20 4 14 16 6 3 8 19 12 7 10 18 2 1
```

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Sample Output 3

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```
77
```

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