

Problem 2717: Semi-Ordered Permutation

Problem Information

Difficulty: Easy

Acceptance Rate: 63.81%

Paid Only: No

Tags: Array, Simulation

Problem Description

You are given a **0-indexed** permutation of n integers `nums`.

A permutation is called **semi-ordered** if the first number equals `1` and the last number equals `n`. You can perform the below operation as many times as you want until you make `nums` a **semi-ordered** permutation:

* Pick two adjacent elements in `nums`, then swap them.

Return `the minimum number of operations to make nums a semi-ordered permutation`.

A **permutation** is a sequence of integers from `1` to `n` of length `n` containing each number exactly once.

Example 1:

Input: `nums = [2,1,4,3]` **Output:** `2` **Explanation:** We can make the permutation semi-ordered using these sequence of operations: 1 - swap `i = 0` and `j = 1`. The permutation becomes `[1,2,4,3]`. 2 - swap `i = 2` and `j = 3`. The permutation becomes `[1,2,3,4]`. It can be proved that there is no sequence of less than two operations that make `nums` a semi-ordered permutation.

Example 2:

Input: `nums = [2,4,1,3]` **Output:** `3` **Explanation:** We can make the permutation semi-ordered using these sequence of operations: 1 - swap `i = 1` and `j = 2`. The permutation

becomes [2,1,4,3]. 2 - swap i = 0 and j = 1. The permutation becomes [1,2,4,3]. 3 - swap i = 2 and j = 3. The permutation becomes [1,2,3,4]. It can be proved that there is no sequence of less than three operations that make nums a semi-ordered permutation.

****Example 3:****

****Input:**** nums = [1,3,4,2,5] ****Output:**** 0 ****Explanation:**** The permutation is already a semi-ordered permutation.

****Constraints:****

*`2 <= nums.length == n <= 50` *`1 <= nums[i] <= 50` *`nums is a permutation.`

Code Snippets

C++:

```
class Solution {
public:
    int semiOrderedPermutation(vector<int>& nums) {

    }
};
```

Java:

```
class Solution {
    public int semiOrderedPermutation(int[] nums) {

    }
}
```

Python3:

```
class Solution:
    def semiOrderedPermutation(self, nums: List[int]) -> int:
```