

Problem 189: Rotate Array

Problem Information

Difficulty: Medium

Acceptance Rate: 43.97%

Paid Only: No

Tags: Array, Math, Two Pointers

Problem Description

Given an integer array `nums`, rotate the array to the right by `k` steps, where `k` is non-negative.

Example 1:

Input: nums = [1,2,3,4,5,6,7], k = 3 **Output:** [5,6,7,1,2,3,4] **Explanation:** rotate 1 steps to the right: [7,1,2,3,4,5,6] rotate 2 steps to the right: [6,7,1,2,3,4,5] rotate 3 steps to the right: [5,6,7,1,2,3,4]

Example 2:

Input: nums = [-1,-100,3,99], k = 2 **Output:** [3,99,-1,-100] **Explanation:** rotate 1 steps to the right: [99,-1,-100,3] rotate 2 steps to the right: [3,99,-1,-100]

Constraints:

* `1 <= nums.length <= 105` * `-231 <= nums[i] <= 231` * `0 <= k <= 105`

Follow up:

- * Try to come up with as many solutions as you can. There are at least **three** different ways to solve this problem.
- * Could you do it in-place with `O(1)` extra space?

Code Snippets

C++:

```
class Solution {  
public:  
void rotate(vector<int>& nums, int k) {  
  
}  
};
```

Java:

```
class Solution {  
public void rotate(int[] nums, int k) {  
  
}  
}
```

Python3:

```
class Solution:  
def rotate(self, nums: List[int], k: int) -> None:  
    """  
    Do not return anything, modify nums in-place instead.  
    """
```