

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

**Example 1:**

**Input:** [1,2,3,4,5,6,7] and  $k = 3$

**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:** [-1,-100,3,99] and  $k = 2$

**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]

**Note:**

- Try to come up as many solutions as you can, there are at least 3 different ways to solve this problem.
- Could you do it in-place with  $O(1)$  extra space?