

Remove Element In an Array

Given an integer array `nums` and an integer `val`, remove all occurrences of `val` in `nums` in-place. The relative order of the elements may be changed.

Input: `nums = [3,2,2,3]`, `val = 3`

Output: 2, `nums = [2,2,_,_]`

Explanation: Your function should return `k = 2`, with the first two elements of `nums` being 2. It does not matter what you leave beyond the returned `k` (hence they are underscores).

Input: `nums = [0,1,2,2,3,0,4,2]`, `val = 2`

Output: 5, `nums = [0,1,4,0,3,_,_,_]`

Explanation: Your function should return `k = 5`, with the first five elements of `nums` containing 0, 0, 1, 3, and 4.

Note that the five elements can be returned in any order.

It does not matter what you leave beyond the returned `k` (hence they are underscores).

Remove Duplicates from Sorted Array

Given an array of integers arr, return true if and only if it is a valid mountain array.

Input: nums = [1,1,2]

Output: 2, nums = [1,2,_]

Explanation: Your function should return k = 2, with the first two elements of nums being 1 and 2 respectively.

It does not matter what you leave beyond the returned k (hence they are underscores).

Input: nums = [0,0,1,1,1,2,2,3,3,4]

Output: 5, nums = [0,1,2,3,4,_,_,_,_,_]

Explanation: Your function should return k = 5, with the first five elements of nums being 0, 1, 2, 3, and 4 respectively.

It does not matter what you leave beyond the returned k (hence they are underscores).

Valid Mountain Array

Given an array of integers arr, return true if and only if it is a valid mountain array.

