**[162. Find Peak Element](https://leetcode.com/problems/find-peak-element/)**

A peak element is an element that is strictly greater than its neighbors.

Given a **0-indexed** integer array nums, find a peak element, and return its index. If the array contains multiple peaks, return the index to **any of the peaks**.

You may imagine that nums[-1] = nums[n] = -∞. In other words, an element is always considered to be strictly greater than a neighbor that is outside the array.

You must write an algorithm that runs in O(log n) time.

**Example 1:**

**Input:** nums = [1,2,3,1]

**Output:** 2

**Explanation:** 3 is a peak element and your function should return the index number 2.

**Example 2:**

**Input:** nums = [1,2,1,3,5,6,4]

**Output:** 5

**Explanation:** Your function can return either index number 1 where the peak element is 2, or index number 5 where the peak element is 6.

**Constraints:**

* 1 <= nums.length <= 1000
* -231 <= nums[i] <= 231 - 1
* nums[i] != nums[i + 1] for all valid i.