1，A peak element is an element that is greater than its neighbors.

Given an input array where num[i] ≠ num[i+1], find a peak element and return its index.

The array may contain multiple peaks, in that case return the index to any one of the peaks is fine.

You may imagine that num[-1] = num[n] = -∞ and you should finish it in O(lg n).

For example, in array [1, 2, 3, 1], 3 is a peak element and your function should return the index number 2.

2, Given a set of distinct integers, S, return all possible subsets.  
Note:  
Elements in a subset must be in non-descending order. The solution set must not contain duplicate subsets. For example, If S = [1,2,3], a solution is:  
[  
  [3],  
  [1],  
  [2],  
  [1,2,3],  
  [1,3],  
  [2,3],  
  [1,2],  
  []  
]