

## 992. Subarrays with K Different Integers

Solve

Hard Topics Companies Hint

Given an integer array `nums` and an integer `k`, return *the number of **good subarrays*** of `nums`.

A **good array** is an array where the number of different integers in that array is exactly `k`.

- For example, `[1,2,3,1,2]` has 3 different integers: 1, 2, and 3.

A **subarray** is a **contiguous** part of an array.

### Example 1:

**Input:** `nums = [1,2,1,2,3], k = 2`  
**Output:** 7  
**Explanation:** Subarrays formed with exactly 2 different integers: `[1,2]`, `[2,1]`, `[1,2]`, `[2,3]`, `[1,2,1]`, `[2,1,2]`, `[1,2,1,2]`

### Example 2:

**Input:** `nums = [1,2,1,3,4], k = 3`  
**Output:** 3  
**Explanation:** Subarrays formed with exactly 3 different integers: `[1,2,1,3]`, `[2,1,3]`, `[1,3,4]`.

Sol

```
class Solution {
    public int subarraysWithKDistinct(int[] nums, int k) {
        if (k == 0) return 0;
        return cntOfNum(nums,k)-cntOfNum(nums,k-1);
    }
    public static int cntOfNum(int[] nums , int k){
        if (k < 0) return 0;
        int l=0 , r=0 , n=nums.length , cnt=0 ;
        Map<Integer, Integer> map=new HashMap<>();
        while(r<n){
            map.put(nums[r] , map.getOrDefault(nums[r],0)+1);
            while(map.size()>k){
                map.put(nums[l],map.get(nums[l])-1);
                if(map.get(nums[l])==0 ) map.remove(nums[l]);
                l++;
            }
            cnt+=(r-l+1);
            r++;
        }
        return cnt;
    }
}
```