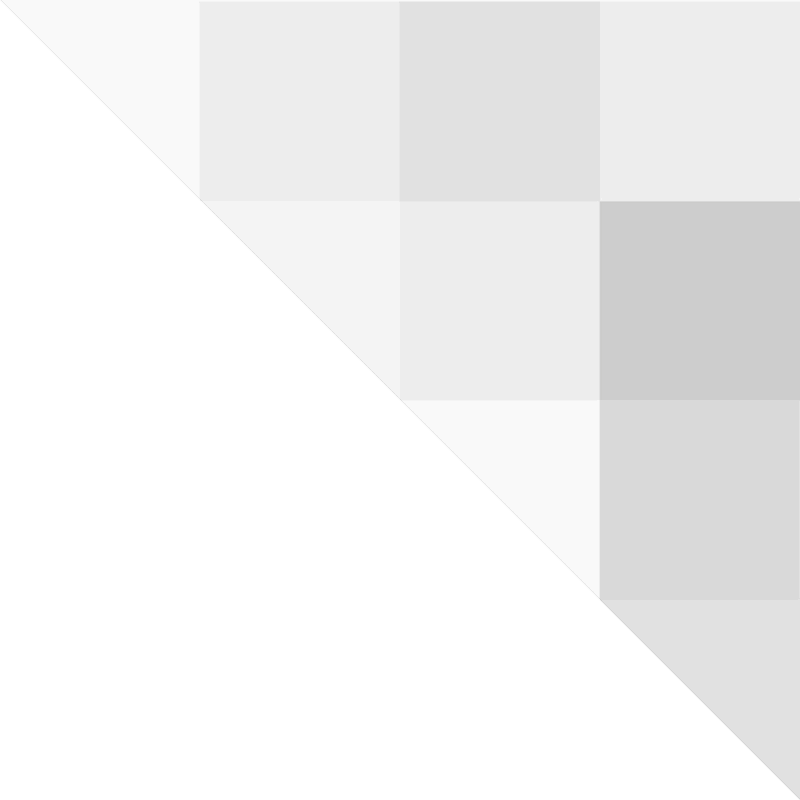
2020 02 08 – Contiguous Arrays

**Q1. Subarray Sum Equals K**

Link:<https://leetcode.com/problems/subarray-sum-equals-k/>

|  |  |
| --- | --- |
| **Example 1**  **Input:** nums = [1,1,1], k = 2  **Output:** 2 | **Example 2**  **Input:** nums = [1,7,6,2,3,3,2], k = 8  **Output:** 4 |

Given an array of integers and an integer k, you need to find the total number of continuous subarrays whose sum equals to k.

**Q2. Continuous Subarray Sum**

Link:<https://leetcode.com/problems/continuous-subarray-sum/>

Given a list of non-negative numbers and a target integer k, write a function to check if the array has a continuous subarray of size at least 2 that sums up to a multiple of k, that is, sums up to n\*k where n is also an integer.

|  |  |
| --- | --- |
| **Example 1:**  **Input:** [23,2,4,6,7], k=6  **Output:** True  **Explanation:** Because [2, 4] is a continuous subarray of size 2 and sums up to 6. |  |

# Q3. Contiguous Array

# Link: <https://leetcode.com/problems/contiguous-array/>

Given a binary array, find the maximum length of a contiguous subarray with equal number of 0 and 1.

**Example 1:**

**Input: [0,1]**

**Output: 2**

**Explanation: [0, 1] is the longest contiguous subarray with equal number of 0 and 1.**

# Q4. Subarray Sums Divisible by K

# Link: <https://leetcode.com/problems/subarray-sums-divisible-by-k/>

Given an array A of integers, return the number of (contiguous, non-empty) subarrays that have a sum divisible by K.

**Example 1:**

**Input:** A = [4,5,0,-2,-3,1], K = 5

**Output:** 7

**Explanation:** There are 7 subarrays with a sum divisible by K = 5:

[4, 5, 0, -2, -3, 1], [5], [5, 0], [5, 0, -2, -3], [0], [0, -2, -3], [-2, -3]

**Note:**

1. 1 <= A.length <= 30000
2. -10000 <= A[i] <= 10000
3. 2 <= K <= 10000