Program for Replace Element in Array

```java
import java.util.HashMap;

public class ReplaceElementInArray {

       public static int[] replaceArrayElement(int[] nums, int[][] opt) {

            HashMap<Integer, Integer> map = new HashMap<>();

            // Populate the HashMap with values from nums and their indices
            for (int i = 0; i < nums.length; i++) {
                map.put(nums[i], i);
            }

     // Perform operations on nums based on the values and indices in the opt array
            for (int i = 0; i < opt.length; i++)

              {
                int oldNum = opt[i][0];
                int newNum = opt[i][1];

                if (map.containsKey(oldNum)) {
                    int index = map.get(oldNum);

                    // Replace the value at the specified index with the new value
                    nums[index] = newNum;

                    // Update the HashMap to reflect the change in nums
                    map.put(newNum, index);

          // Remove the oldNum from the HashMap as it no longer exists in nums
                    map.remove(oldNum);
                }
            }

            return nums;
        }

    public static void main(String[] args) {


        int [] nums = {1,2,4,6};
        int [][] opt = {{1,3},{4,7},{6,1}};

        int[] result =replaceArrayElement(nums, opt);
        // Print the modified array

        System.out.print("Modified Array: ");

         for (int num : result) {

         System.out.print(num + " ");

        }
      }
    }
```

OUTPUT

```
Modified Array : 3 2 7 1
```

Program for Number of Subarrays With LCM Equal to K

```java
import java.util.*;

public class SubarraysWithLCM {
    public static int countSubarraysWithLCM(int[] arr, int k) {
        int n = arr.length;
        int count = 0;

        for (int i = 0; i < n; i++) {
            int lcm = arr[i];

            if (lcm == k) {
                count++;
            }

            for (int j = i + 1; j < n; j++) {
                lcm = calculateLCM(lcm, arr[j]);

                if (lcm == k) {
                    count++;
                } else if (lcm > k) {
                    break; // LCM will only increase further
                }
            }
        }

        return count;
    }

    public static int calculateLCM(int a, int b) {
        return a * b / calculateGCD(a, b);
    }

    public static int calculateGCD(int a, int b) {
        if (b == 0) {
            return a;
        }
        return calculateGCD(b, a % b);
    }
    public static void main(String[] args) {
        // Example input
        int[] arr = {3,6,2,7,1};
        int k = 6;

        // Call the function to count subarrays with LCM equal to k


        int result = countSubarraysWithLCM(arr, k);

        // Output the result
        System.out.println("Number of subarrays:  " + result);
    }
}
```

OUTPUT

```
Number of subarrays:  4
```