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6989. Maximum Sum of Almost Unique Subarray

You are given an integer array `nums` and two positive integers `m` and `k`.

Return *the **maximum sum** out of all **almost unique** subarrays of length* `k` *of* `nums`. If no such subarray exists, return `0`.

A subarray of `nums` is **almost unique** if it contains at least `m` pairwise distinct elements.

A subarray is a contiguous **non-empty** sequence of elements within an array.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:

```
Input: nums = [2,6,7,3,1,7], m = 3, k = 4
Output: 18
Explanation: There are 3 almost unique subarrays of size k =
4
. These subarrays are [2, 6, 7, 3], [6, 7, 3, 1], and [7, 3, 1, 7]. Among these sub
```

Example 2:

```
Input: nums = [5,9,9,2,4,5,4], m = 1, k = 3
Output: 23
Explanation: There are 5 almost unique subarrays of size k. These subarrays are [5,
```

Example 3:

```
Input: nums = [1,2,1,2,1,2,1], m = 3, k = 3
Output: 0
Explanation: There are no subarrays of size k = 3 that contain at least m = 3
 distinct elements in the given array [1,2,1,2,1,2,1]. Therefore, no almost unique
```

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Constraints:

- $1 <= \text{nums.length} <= 2 * 10^4$
- $1 <= m <= k <= \text{nums.length}$
- $1 <= \text{nums}[i] <= 10^9$

JavaScript ▼

```javascript
const addOneOrManyMap = (m, x, cnt = 1) => m.set(x, m.get(x) + cnt || cnt);
const removeOneOrManyMap = (m, x, cnt = 1) => { let occ = m.get(x); occ > cnt ? m.set(x, occ - cnt) : m.delete(x); };
const preSum = (a) => { let pre = [0]; for (let i = 0; i < a.length; i++) { pre.push(pre[i] + a[i]); } return pre; };
const subArraySum = (a, l, r) => a[r + 1] - a[l];

const maxSum = (a, M, k) => {
    let m = new Map(), n = a.length, pre = preSum(a), res = 0;
    for (let i = 0; i < n; i++) {
        let l = i - k + 1;
        addOneOrManyMap(m, a[i]);
        if (l > 0) removeOneOrManyMap(m, a[l - 1]);
        if (m.size >= M) {
            let sum = subArraySum(pre, l, i);
            if (sum > res) res = sum;
        }
    }
    return res;
};
```

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