

Fuzzy Uniqueness

Time limit: 3 s

Memory limit: 512 MB

After noticing Barish's machine learning attempts to predict IOI 2022 results and Rashad's social comfort experiment, Rahim thought he should do something *unique* instead of those boring activities. However, it is very hard to find something unique to do, since everyone is doing everything these days! The only thing Rahim could think of doing turned out to be finding the uniqueness of the activities people do. So given a sequence of activities, Rahim defined its fuzzy uniqueness as the number of contiguous subarrays of the given sequence that have uniqueness value between L and R . The uniqueness value of the subarray of activities is defined as the number of activities that only occurs once in the subarray (note that it still may occur more than once in the entire sequence).

Formally, Rahim represents all activities as an array of N integers, and he wants to count the number of contiguous subarrays that have uniqueness value between L and R (inclusive), where the uniqueness value of a subarray is defined as the number of unique elements in it. Unfortunately, Rahim himself got fuzzy thinking about all this complex stuff, but you are here to help him answer his question of fuzzy uniqueness.

Input

In the first line, you are given integers N, L, R , the number of total activities and two bounds defining fuzzy uniqueness, in order. The next line consists of N integers, a_1, a_2, \dots, a_N , the representation of the activities.

Output

Print the number of contiguous subarrays that have uniqueness value between L and R (inclusive).

Constraints

- $1 \leq N \leq 150000$
- $0 \leq L \leq R \leq N$
- $1 \leq a_i \leq 10^9$

Examples

Input	Output	Explanation
5 1 2 1 2 2 1 3	12	<p>Contiguous subarrays that have uniqueness value 1: [1,1], [2,2], [3,3], [4,4], [5,5], [1,3], [2,4], [1,5]</p> <p>Contiguous subarrays that have uniqueness value 2: [1,2], [3,4], [4,5], [2,5]</p> <p>Here $[i, j]$ indicates the subarray a_i, \dots, a_j</p>

Subtasks

This task contains 5 subtasks as described below:

Subtask	Additional constraints	Scoring
1	$N \leq 100$	8 points
2	$N \leq 2000$	13 points
3	$L = R = 1$ and the number of distinct integers in the activities array is at most 500	18 points
4	$L = R = 0$	22 points
5	No additional constraints	39 points