D. Non-Secret Cypher

time limit per test: 3 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Berland starts to seize the initiative on the war with Flatland. To drive the enemy from their native land, the berlanders need to know exactly how many more flatland soldiers are left in the enemy's reserve. Fortunately, the scouts captured an enemy in the morning, who had a secret encrypted message with the information the berlanders needed so much.

The captured enemy had an array of positive integers. Berland intelligence have long been aware of the flatland code: to convey the message, which contained a number m, the enemies use an array of integers a. The number of its subarrays, in which there are at least k equal numbers, equals m. The number k has long been known in the Berland army so General Touristov has once again asked Corporal Vasya to perform a simple task: to decipher the flatlanders' message.

Help Vasya, given an array of integers a and number k, find the number of subarrays of the array of numbers a, which has at least k equal numbers.

Subarray $a[i \ldots j]$ $(1 \le i \le j \le n)$ of array $a = (a_1, a_2, \ldots, a_n)$ is an array, made from its consecutive elements, starting from the i-th one and ending with the j-th one: $a[i \ldots j] = (a_i, a_{i+1}, \ldots, a_j)$.

Input

The first line contains two space-separated integers n, k $(1 \le k \le n \le 4 \cdot 10^5)$, showing how many numbers an array has and how many equal numbers the subarrays are required to have, correspondingly.

The second line contains n space-separated integers a_i $(1 \le a_i \le 10^9)$ — elements of the array.

Output

Print the single number — the number of such subarrays of array a, that they have at least k equal integers.

Please do not use the `%lld` specifier to read or write 64-bit integers in C++. In is preferred to use the `cin`, `cout` streams or the `%I64d` specifier.

Examples

input Copy

```
4 2
1 2 1 2
```

output Copy

```
3
```

input Copy

```
5 3
1 2 1 1 3
```

output Copy

```
2
```

input Copy

```
3 1
1 1 1
```

output Copy

```
6
```

Note

In the first sample are three subarrays, containing at least two equal numbers: (1,2,1), (2,1,2) and (1,2,1,2).

In the second sample are two subarrays, containing three equal numbers: (1,2,1,1,3) and (1,2,1,1).

In the third sample any subarray contains at least one 1 number. Overall they are 6: (1), (1), (1), (1,1), (1,1) and (1,1,1).