Problem A Inversion

bobo has a sequence $a_1, a_2, \ldots, a_n$. He is allowed to swap two adjacent numbers for no more than k times.

Find the minimum number of inversions after his swaps.

Note: The number of inversions is the number of pair (i, j) where $1 \leq i < j \leq n$ and $a_i > a_j$.

Input

The first line contains 2 integers n, k $(1 \leq n \leq 10^5, 0 \leq k \leq 10^9)$. The second line contains n integers $a_1, a_2, \ldots, a_n$ $(0 \leq a_i \leq 10^9)$.

Output

A single integer denotes the minimum number of inversions.

Sample input 1

```
3 1
2 2 1
```

Sample output 1

```
1
```

Sample input 2

```
3 0
2 2 1
```

Sample output 2

```
2
```