

Problem A. Inversion

Input file: *standard input*
Output file: *standard output*
Time limit: 2 seconds
Memory limit: 512 mebibytes

You have a sequence a_1, a_2, \dots, a_n . It is allowed to swap two **adjacent** numbers no more than k times. Find the minimal number of inversions after the swaps (number of inversions is the number of pairs (i, j) where $1 \leq i < j \leq n$ and $a_i > a_j$).

Input

The first line of the input contains two 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, \dots, a_n ($0 \leq a_i \leq 10^9$).

Output

Print the minimum number of inversions.

Examples

standard input	standard output
3 1 2 2 1	1
3 0 2 2 1	2