Element-Wise Comparison

Input file:	*standard input*
Output file:	*standard output*
Time limit:	0.4 seconds
Memory limit:	1024 mebibytes

You are given a permutation p of length n: it contains numbers $1, 2, \ldots, n$ in some order. Your task is to find the number of pairs of subarrays of length m such that the left one is element-wise smaller than the right one.

Formally, consider two subarrays: $p_i, p_{i+1}, \ldots, p_{i+m-1}$ and $p_j, p_{j+1}, \ldots, p_{j+m-1}$. When $i < j$, we say the first subarray is the left one, and the second is the right one; the subarrays may intersect. The first one is *element-wise less* than the second when m inequalities hold simultaneously:

$$p_i < p_j, \quad p_{i+1} < p_{j+1}, \quad \ldots, \quad p_{i+m-1} < p_{j+m-1}.$$

Input

The first line contains two integers n and m ($1 \le m \le n \le 5 \cdot 10^4$). The second line contains n integers separated by spaces: the permutation p itself.

Output

Output the only integer: the answer to the problem.

Examples

standard input	*standard output*
5 3 5 2 1 3 4	0
5 2 3 1 4 2 5	2
4 2 1 2 3 4	3
4 2 4 3 2 1	0

Explanations

In the second example, the answer 2 is formed from two pairs of subarrays:

- $\{3, 1\}$ is element-wise less than $\{4, 2\}$,
- $\{1, 4\}$ is element-wise less than $\{2, 5\}$.

In the third example, the answer 3 is formed from three pairs of subarrays:

- $\{1, 2\}$ is element-wise less than $\{2, 3\}$,
- $\{2, 3\}$ is element-wise less than $\{3, 4\}$,
- $\{1, 2\}$ is element-wise less than $\{3, 4\}$.