# Gabi with cetera

| | |
|---|---|
| Input file: | `standard input` |
| Output file: | `standard output` |
| Time limit: | 0.3 seconds |
| Memory limit: | 1024 megabytes |

*Haida numa' and numa' say Gabi with cetera*

Gabi Stangau, Livia Pop - Why do I drink bit by bit?

While playing the violin, Gabi came up with an idea for a problem, but since he doesn't know programming, he's leaving it up to you to solve it — and he promises to play for you if you succeed:

You are given an array $A$ of $N$ positive integers, numbered from 1 to $N$. You must determine how many ranges $[L, R]$ with $1 < L \leq R < N$ exist such that all elements $A[L], A[L+1], \ldots, A[R]$ are strictly greater than $A[L-1]$ and $A[R+1]$. Additionally, you are asked to determine the maximum length of such a range with this property.

Write a program that solves the following two requirements:

1. Determine the maximum length of a range satisfying the condition described.
2. Determine the number of ranges satisfying the condition.

## Input

The first line will contain the numbers $C$ and $N$, separated by a single space. (Where $C$ is the requirement number and $N$ is the length of the array $A$)

The second line will contain $N$ numbers, separated by space, representing the elements of the array $A$.

- $3 \leq N \leq 10^6$
- $0 \leq A[i] \leq 10^6$

## Output

The first line will contain a single number, representing the answer for the given requirement.

## Examples

| standard input | standard output |
|---|---|
| 1 12<br>0 1 2 4 3 1 3 4 5 2 1 0 | 10 |
| 2 12<br>0 1 2 4 3 1 3 4 5 2 1 0 | 8 |
| 1 12<br>0 1 2 4 4 1 0 2 4 1 0 0 | 5 |
| 2 12<br>0 1 2 4 4 1 0 2 4 1 0 0 | 6 |