You are given a **0-indexed** integer array books of length n where books[i] denotes the number of books on the ith shelf of a bookshelf.

You are going to take books from a **contiguous** section of the bookshelf spanning from l to r where 0 <= l <= r < n. For each index i in the range l <= i < r, you must take **strictly fewer** books from shelf i than shelf i + 1.

Return *the* ***maximum*** *number of books you can take from the bookshelf.*

**Example 1:**

Input: books = [8,5,2,7,9]  
Output: 19  
Explanation:  
- Take 1 book from shelf 1.  
- Take 2 books from shelf 2.  
- Take 7 books from shelf 3.  
- Take 9 books from shelf 4.  
You have taken 19 books, so return 19.  
It can be proven that 19 is the maximum number of books you can take.

**Example 2:**

Input: books = [7,0,3,4,5]  
Output: 12  
Explanation:  
- Take 3 books from shelf 2.  
- Take 4 books from shelf 3.  
- Take 5 books from shelf 4.  
You have taken 12 books so return 12.  
It can be proven that 12 is the maximum number of books you can take.

**Example 3:**

Input: books = [8,2,3,7,3,4,0,1,4,3]  
Output: 13  
Explanation:  
- Take 1 book from shelf 0.  
- Take 2 books from shelf 1.  
- Take 3 books from shelf 2.  
- Take 7 books from shelf 3.  
You have taken 13 books so return 13.  
It can be proven that 13 is the maximum number of books you can take.

**Constraints:**

* 1 <= books.length <= 105
* 0 <= books[i] <= 105