1451. Minimum Number of Taps to Open to Water a Garden

Difficulty : Hard

https://leetcode.com/problems/minimum-number-of-taps-to-open-to-water-a-garden

There is a one-dimensional garden on the x-axis. The garden starts at the point `0` and ends at the point `n`. (i.e., the length of the garden is `n`).

There are `n + 1` taps located at points `[0, 1, ..., n]` in the garden.

Given an integer `n` and an integer array `ranges` of length `n + 1` where `ranges[i]` (0-indexed) means the `i-th` tap can water the area `[i - ranges[i], i + ranges[i]]` if it was open.

Return *the minimum number of taps* that should be open to water the whole garden, If the garden cannot be watered return **-1**.

Example 1:
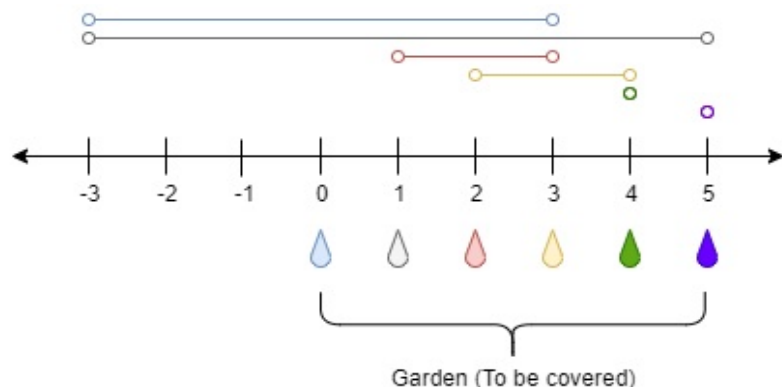

```
Input: n = 5, ranges = [3,4,1,1,0,0]
Output: 1
Explanation: The tap at point 0 can cover the interval [-3,3]
The tap at point 1 can cover the interval [-3,5]
The tap at point 2 can cover the interval [1,3]
The tap at point 3 can cover the interval [2,4]
The tap at point 4 can cover the interval [4,4]
The tap at point 5 can cover the interval [5,5]
Opening Only the second tap will water the whole garden [0,5]
```

Example 2:

```
Input: n = 3, ranges = [0,0,0,0]
Output: -1
Explanation: Even if you activate all the four taps you cannot water the whole garden.
```

Constraints:

- `1 <= n <= 10^4`
- `ranges.length == n + 1`
- `0 <= ranges[i] <= 100`