1539. Kth Missing Positive Number

Description

Given an array `arr` of positive integers sorted in a **strictly increasing order**, and an integer `k`.

Return *the* `k th` ***positive*** *integer that is* ***missing*** *from this array.*

Example 1:

```
Input: arr = [2,3,4,7,11], k = 5
Output: 9
Explanation: The missing positive integers are [1,5,6,8,9,10,12,13,...]. The 5 th missing positive integer is 9.
```

Example 2:

```
Input: arr = [1,2,3,4], k = 2
Output: 6
Explanation: The missing positive integers are [5,6,7,...]. The 2 nd missing positive integer is 6.
```

Constraints:

- `1 <= arr.length <= 1000`
- `1 <= arr[i] <= 1000`
- `1 <= k <= 1000`
- `arr[i] < arr[j]` for `1 <= i < j <= arr.length`

Follow up:

Could you solve this problem in less than O(n) complexity?