5453. Last Moment Before All Ants Fall Out of a Plank

We have a wooden plank of the length `n` **units**. Some ants are walking on the plank, each ant moves with speed **1 unit per second**. Some of the ants move to the **left**, the other move to the **right**.

When two ants moving in two **different** directions meet at some point, they change their directions and continue moving again. Assume changing directions doesn't take any additional time.

When an ant reaches **one end** of the plank at a time `t`, it falls out of the plank imediately.

Given an integer `n` and two integer arrays `left` and `right`, the positions of the ants moving to the left and the right. Return *the moment* when the last ant(s) fall out of the plank.

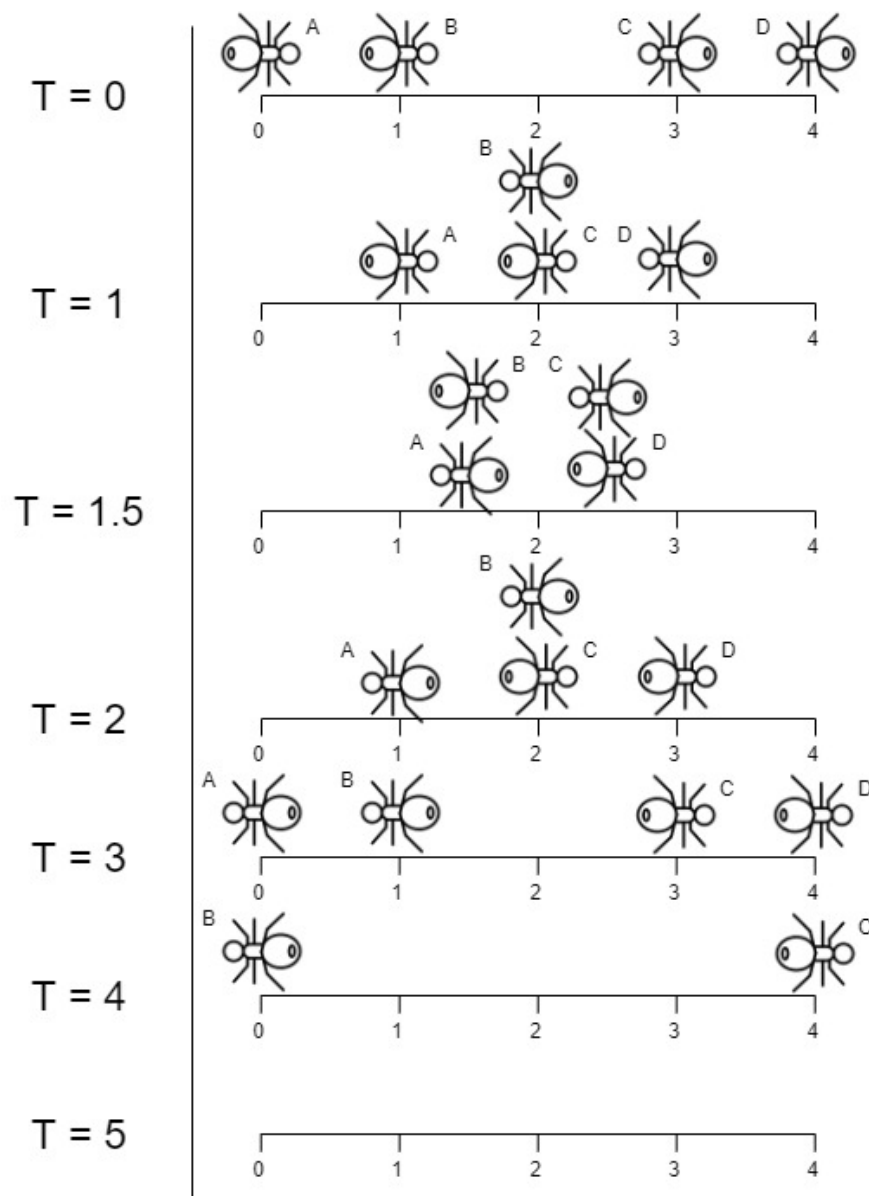|	
User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:

T = 0

T = 1

T = 1.5

T = 2

T = 3

T = 4

T = 5

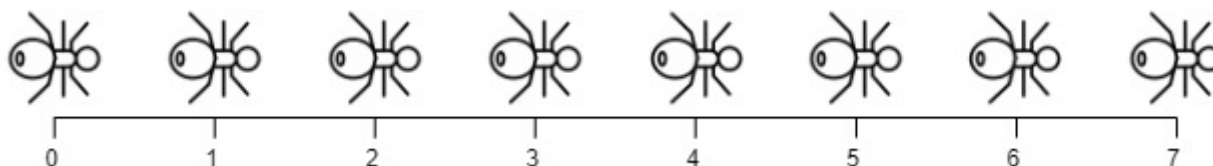**Input:** n = 4, left = [4,3], right = [0,1]
Output: 4
Explanation: In the image above:
-The ant at index 0 is named A and going to the right.
-The ant at index 1 is named B and going to the right.
-The ant at index 3 is named C and going to the left.
-The ant at index 4 is named D and going to the left.
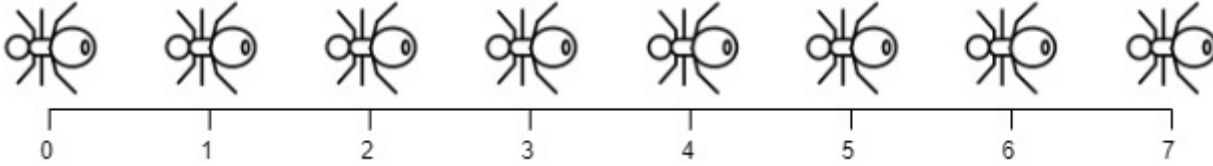Note that the last moment when an ant was on the plank is t = 4 second, after that it fall

Example 2:

```
Input: n = 7, left = [], right = [0,1,2,3,4,5,6,7]
Output: 7
Explanation: All ants are going to the right, the ant at index 0 needs 7 seconds to fall.
```

Example 3:


```
Input: n = 7, left = [0,1,2,3,4,5,6,7], right = []
Output: 7
Explanation: All ants are going to the left, the ant at index 7 needs 7 seconds to fall.
```

Example 4:

```
Input: n = 9, left = [5], right = [4]
Output: 5
Explanation: At t = 1 second, both ants will be at the same intial position but with diffe
```

Example 5:

```
Input: n = 6, left = [6], right = [0]
Output: 6
```

Constraints:

- 1 <= n <= 10^4
- 0 <= left.length <= n + 1
- 0 <= left[i] <= n
- 0 <= right.length <= n + 1
- 0 <= right[i] <= n
- 1 <= left.length + right.length <= n + 1
- All values of `left` and `right` are unique, and each value can appear **only in one** of the two arrays.

JavaScript ▾   ⟨⟩   ⟳   ⚙

```
1 ▾ /**
2    * @param {number} n
3    * @param {number[]} left
4    * @param {number[]} right
5    * @return {number}
6    */
7 ▾ var getLastMoment = function(n, left, right) {
8
```