ARRAY : Video - 66

~~Medium~~ ... E.A.S.Y ...

Leetcode -1503

(Aptitude)

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

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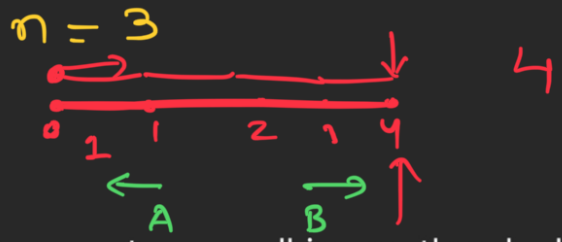
1503. Last Moment Before All Ants Fall Out of a Plank

Hint

Medium 639 235

Companies



We have a wooden plank of the length `n` **units**. Some ants are walking on the plank, each ant moves with a speed of **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 does not take any additional time.

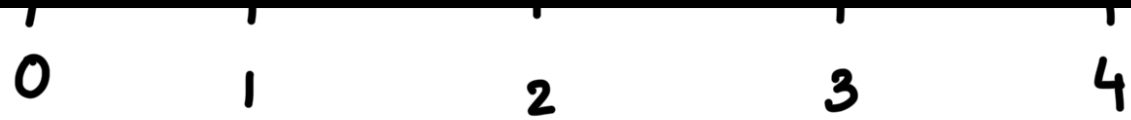
When an ant reaches **one end** of the plank at a time `t`, it falls out of the plank immediately.

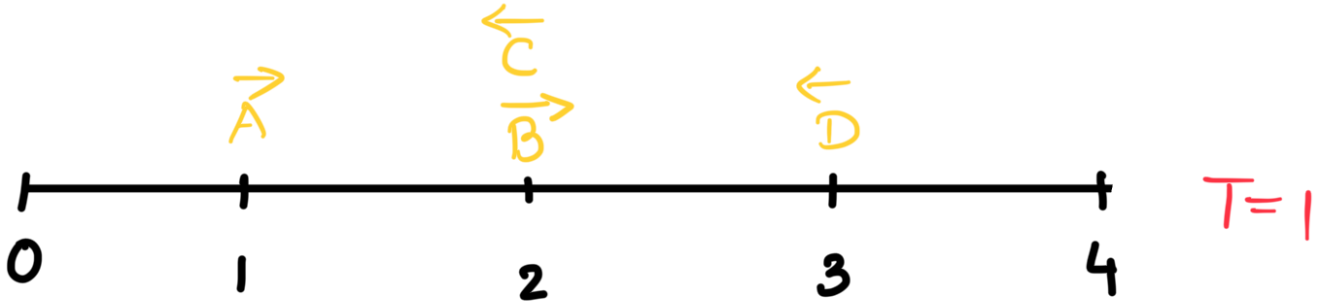
Given an integer `n` and two integer arrays `left` and `right`, the positions of the ants moving to the left and the right, return *the moment when the last ant(s) fall out of the plank*.

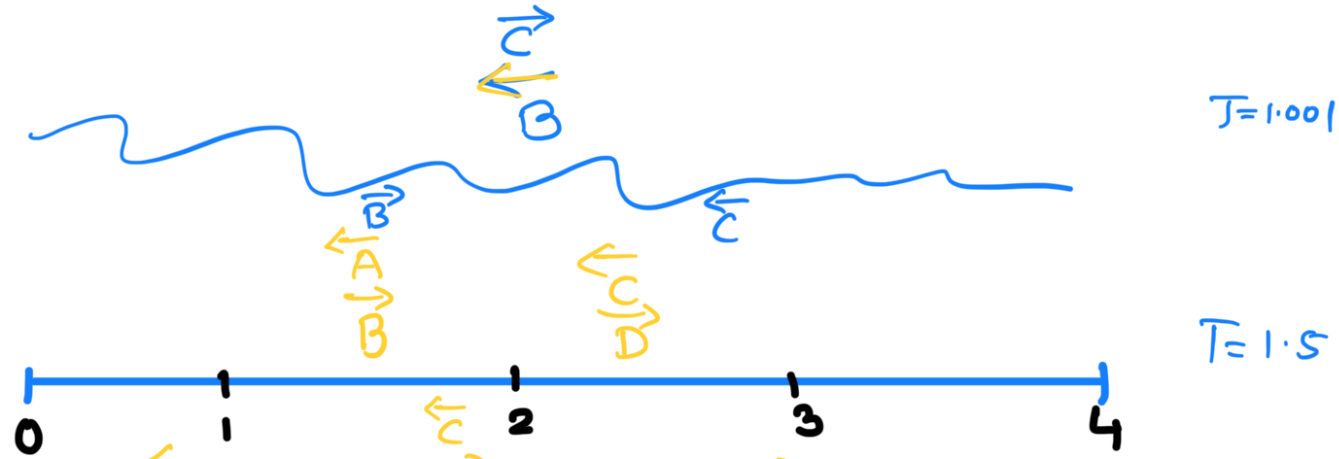
Example :- n = 4

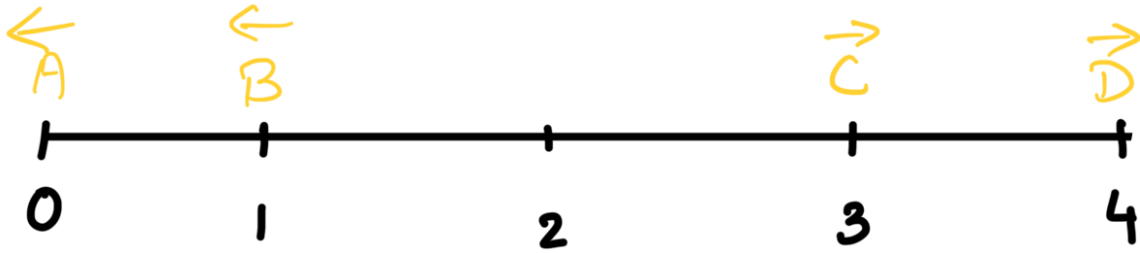
left = [4,3]

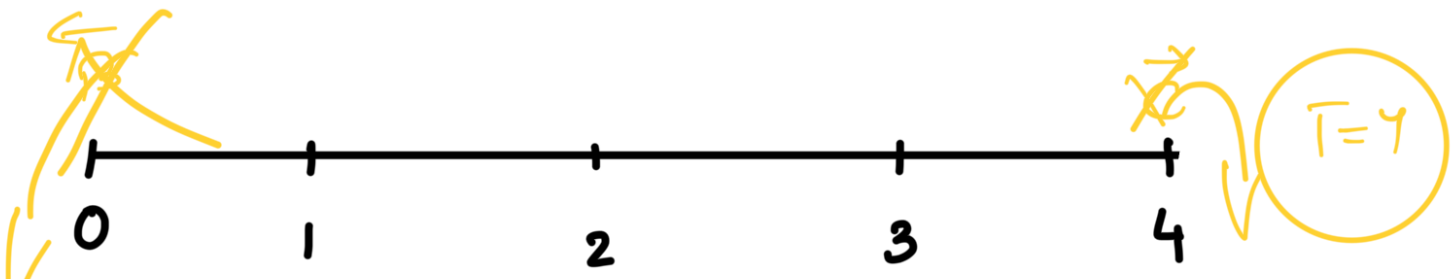
right = [0,1]


0
1
2
3
4

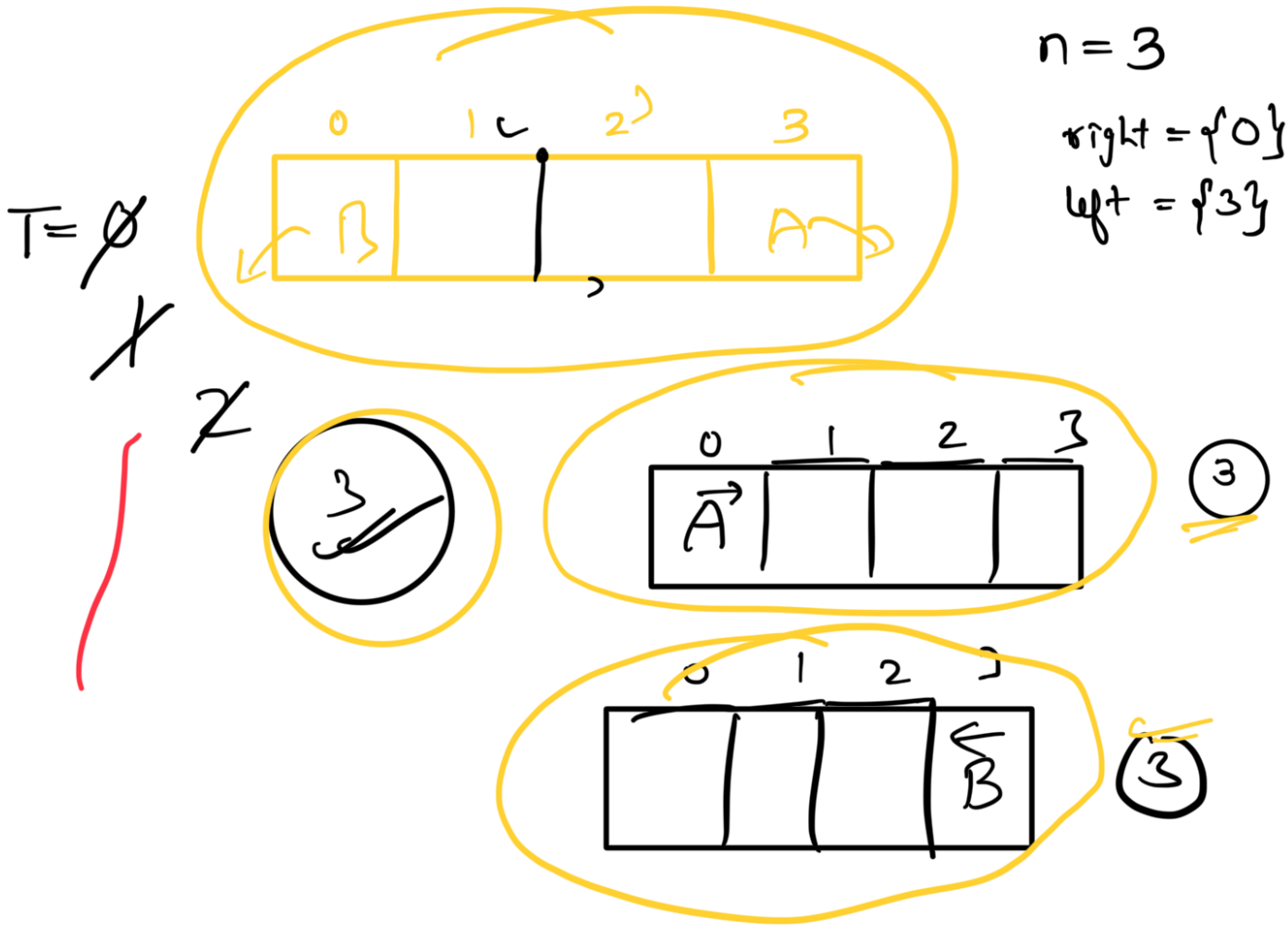

A
C
B
D
0
1
2
3
4
T=1


C
B
T=1.001
B
A
B
C
D
T=1.5
0
1
2
3
4
A
C
B
D
T=2
0
1
2
3
4


A
B
C
D
T=3
0
1
2
3
4


A
C
T=4
0
1
2
3
4

T = 4



"You don't have to think about collision.

Assume they pass each

Other → Magical Ants"

$n = 4$

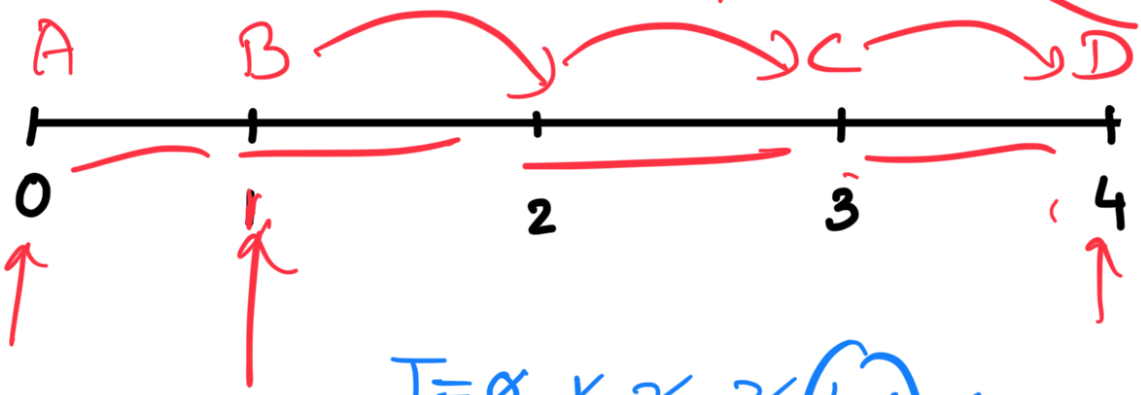
left = [4, 3]

right = [0, 1]

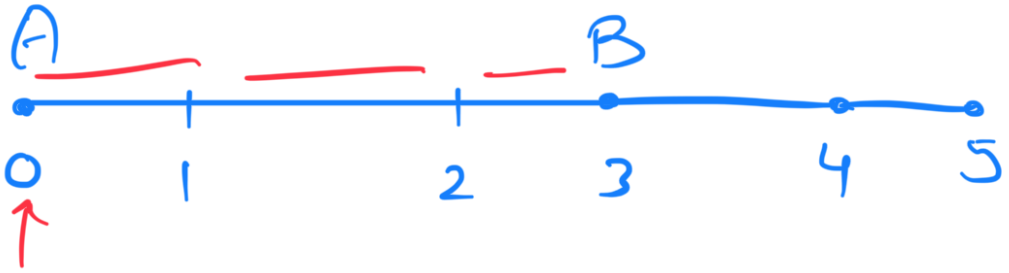
4

$T = 4 \quad 4 - 0 = 4$

$n - 1 = 3$



$T = \cancel{0} \; \cancel{1} \; \cancel{2} \; \cancel{3} \; 4$



T =

A_time = $n - 0 = n = 5$

B_time = idx = 3