

287. Find the Duplicate Number

1 3 4 2 2

Pigeonhole principle $|A| = n + 1$
 $n \in [1..n]$

At least 2 of these numbers are the same.

Model it as a LL problem

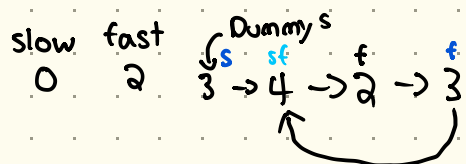
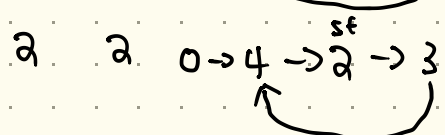
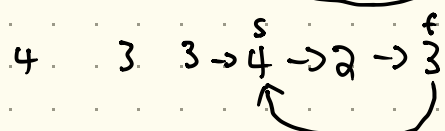
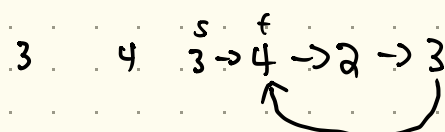
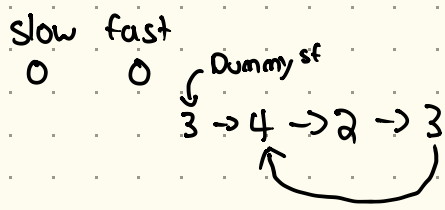
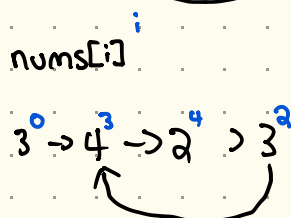
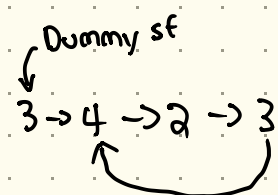
$\text{nums}[0]$ = starting node of the linked l.

$[1..n]$ are possible nodes that represent $\text{nums}[i]$

The value of $\text{nums}[i]$ = node it points to

0 1 2 3 4

3 1 3 4 2



$\text{nums}[3] = 4$