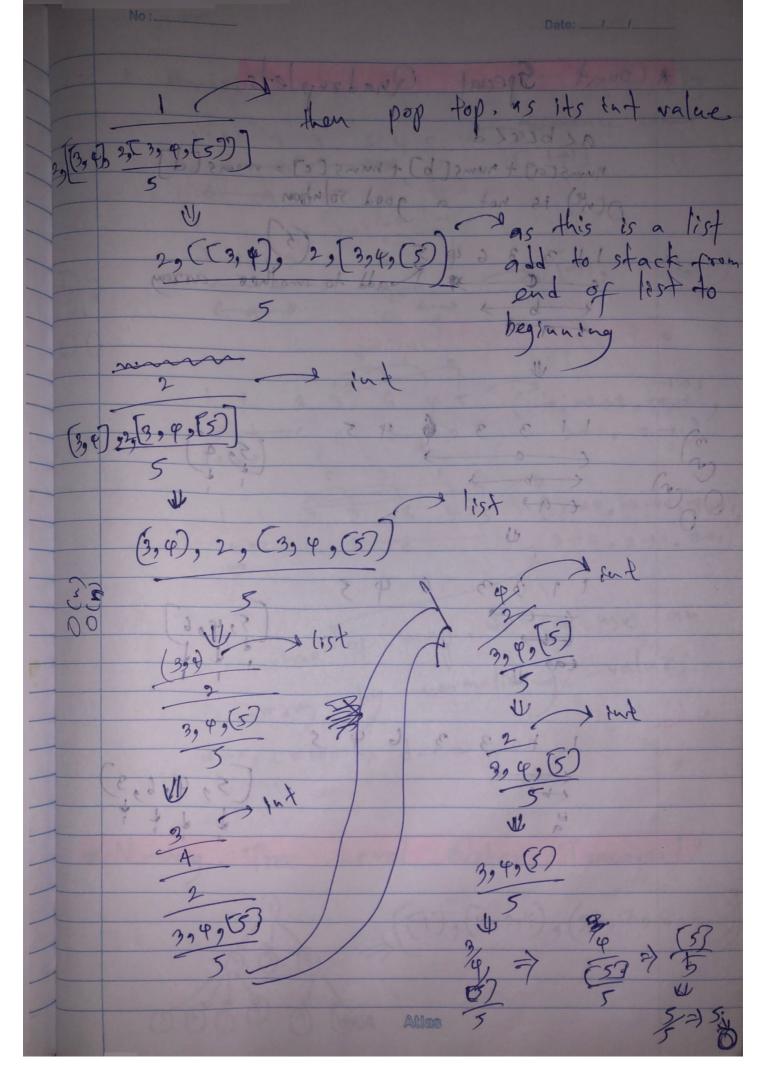# * Flatten Nested List Iterator

$$[1,2,3,4] , [1,[2,3,4],[2,3,[4,5]]]$$

$$[[1],[1,2],2],3,4,[5]]$$

Storing all the elements once in List
or queue is not good solution.

- $[1,[2,[[3,4],[2,[3,4,[5]]]]),5]$

store in a stack, from end to
beginning.

1

then pop top, as its int value

$2, [[3,4], 2, [3,4,[5]]]$
5

⇓

$2, [[3,4], 2, [3,4,(5)]]$
5

as this is a list add to stack from end of list to beginning

⇓

2 ⟶ int

$[3,4]$ $2, [3,4,[5]]$
5

⇓

$(3,4), 2, (3,4,(5))$

5 ⟶ list

⇓ ⟶ list

$(3,4)$
2
$3,4,(5)$
5

⇓ ⟶ int

3
4
2
$3,4,[5]$
5

4
2
$3,4,[5]$
5

⇓ ⟶ int

2
$3,4,(5)$
5

⇓

$3,4,(5)$
5

⇓

$\frac{3}{4}$
$\frac{[5]}{5}$
⇒
$\frac{4}{[5]}$
5
⇒
$\frac{[5]}{5}$

⇓

$\frac{5}{5}$ ⇒ 5