

SUNDAY MORNING → 12 pm
Extra class
5(-)

Solving Medium Questions - Level 2 & Doubt Clearing Session - LIVE

Special class

2 minute
wait

①

Painting fence

→ "N" post
→ "k" color

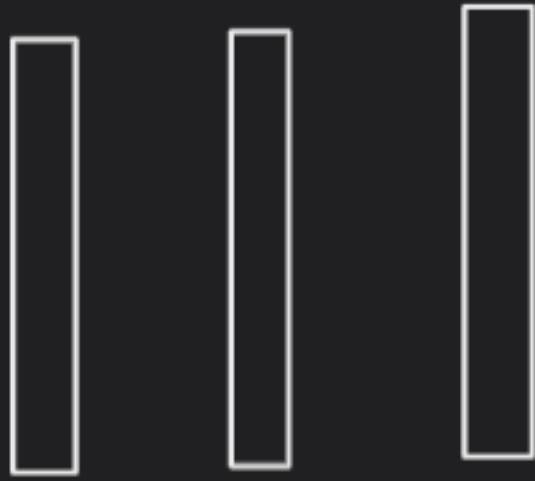
→ not more than
2 adjacent post
have same color

find total no.
of ways



k → color

$k=2$



R B

<u>R</u>	<u>R</u>	<u>B</u>
<u>R</u>	<u>B</u>	<u>R</u>
<u>R</u>	<u>B</u>	<u>B</u>
<u>B</u>	<u>R</u>	<u>R</u>
<u>B</u>	<u>R</u>	<u>B</u>
<u>B</u>	<u>B</u>	<u>R</u>

A large curly brace on the right side of the grid groups all six rows.

ans = 6

X X X X

$K=2$

R B

R R B R-

R R B B-

R B R R-

R B B R-

R B R B-

B R R B-

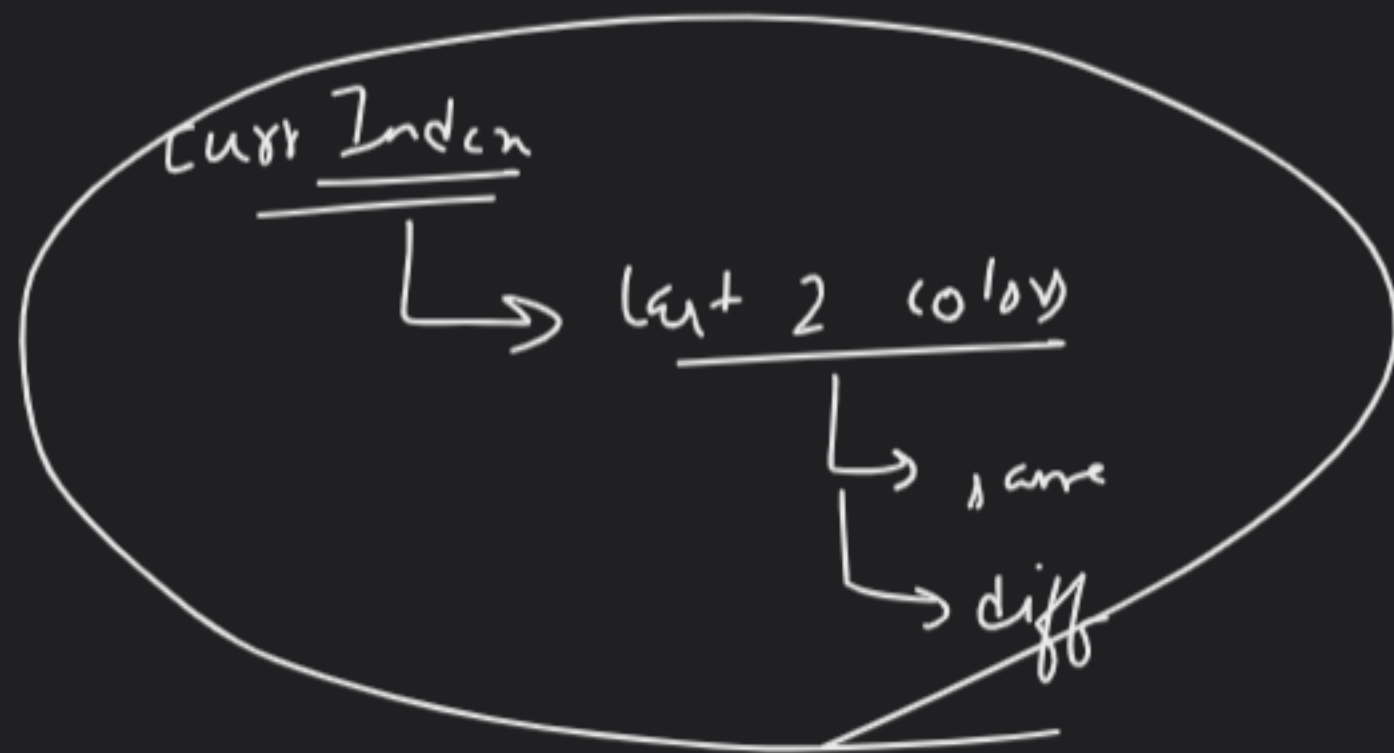
B R B R-

B B R R-

B B R B-

B R B B-

10 ways

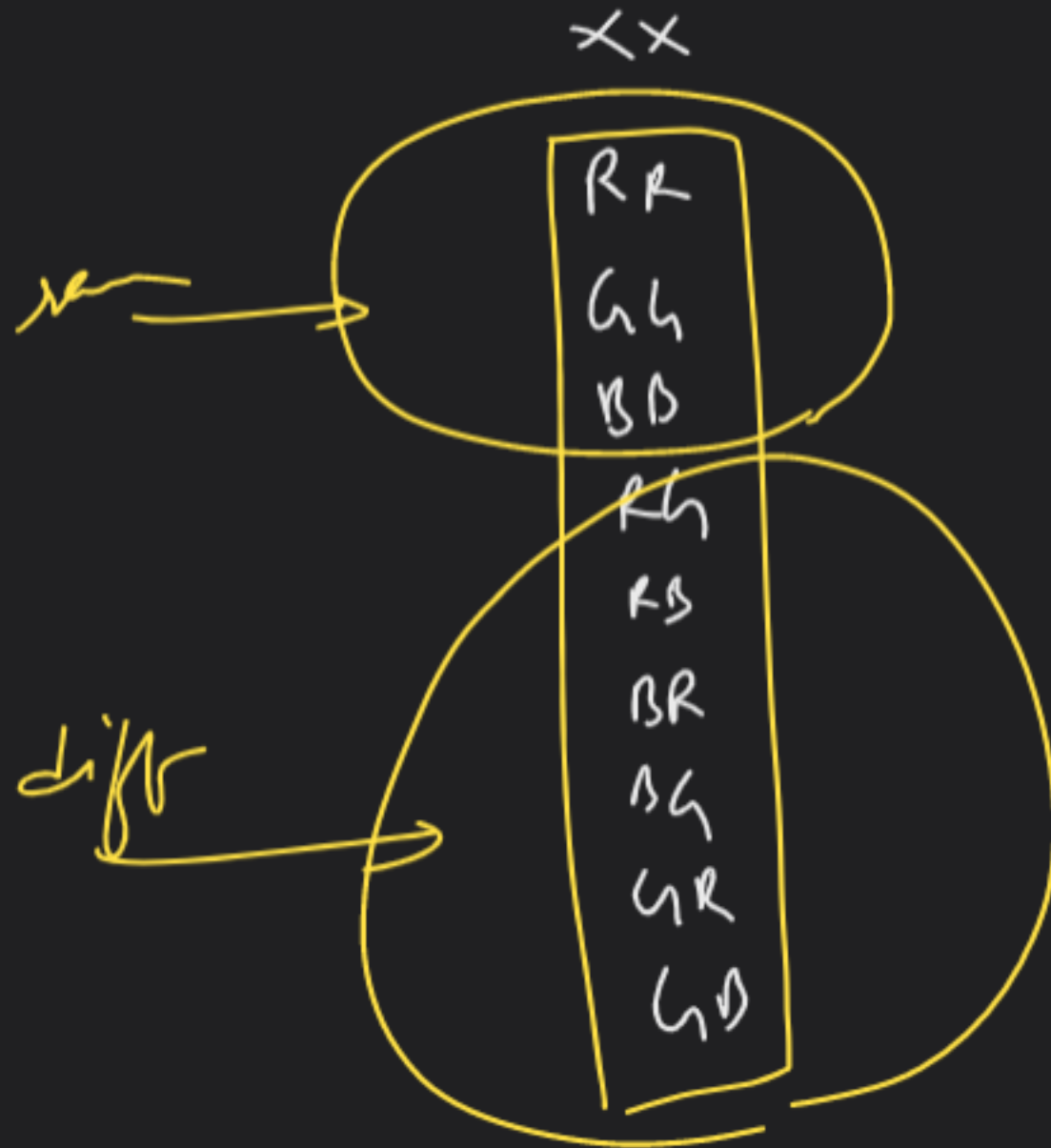




$K=3 \Rightarrow R G B$

same	<div data-bbox="521 385 686 662"> RR GR BG </div> <div data-bbox="740 554 878 631">→ 3</div>	<div data-bbox="1097 369 1262 723"> RR RG GR BG GR GB RB </div> <div data-bbox="1317 462 1426 600">→ 6</div>		
diff	<div data-bbox="521 770 686 1232"> RG RB BR GB GR BR </div> <div data-bbox="740 985 878 1062">→ 1</div>	<div data-bbox="987 739 1454 1262"> RRG, RGR, GRG RAB, RAB, LRL LGR, KAR, GAG LGB, ROL, LOR BRK, DRB, LOR BRK, BKL BRK, BKL BGL, BGL BGL, BGL </div> <div data-bbox="1481 954 1811 1124"> $24 \times 2 = 48$ </div> <div data-bbox="1317 1093 1454 1232">→ 15</div>	<div data-bbox="1564 508 1728 631">(18)</div> <div data-bbox="1536 1262 1701 1416">(66)</div>	<div data-bbox="2030 523 2195 646">78</div> <div data-bbox="2085 985 2359 1216"> 16×2 (132) </div>
Total	<div data-bbox="576 1309 905 1447"> $3+6=9$ </div>	<div data-bbox="1070 1278 1426 1432"> $6+18=24$ </div>		<div data-bbox="2030 1262 2304 1416">(180)</div>

$$K=3 \rightarrow R \cup B$$



$n=1$

$n=2$

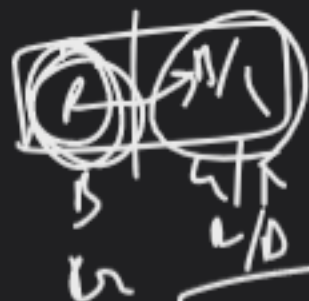
$n=3$

$n=4$

$n=5$

same →	→	<div><div><u>RR</u> <u>GH</u> <u>BB</u></div><div><u>K</u> <u>3</u></div></div>	<div><div>RRH GGB RBB GKR</div><div>BRR → BGG</div><div><u>1</u></div></div>	<div><div>→ 18</div></div>	<div><div>→ 11</div></div>
diff →	↗	<div><div>RR GH BR GB BB GG</div><div>K 3 6</div></div>	<div><div><u>RRB</u> RGR RGB <u>RRH</u> RGD BGR <u>GHK</u> KOR GGB <u>GHG</u> RAG GHB <u>BBA</u> GRB GRH <u>BGB</u> BRG GRG</div><div><div>→ 5 × 2 = 10</div><div>→ 18</div></div></div>	<div><div>24 × 2 = 48</div></div>	<div><div>→ 132</div><div>→ 11</div></div>
Total →	$\begin{matrix} R \\ G \\ B \end{matrix} \rightarrow 3$	$3 + 1 = 4$	$1 + 18 = 19$	66	

$f(n, k)$



R	R	B/G
L/S	R/B	
A	A	R/S



same

diff

$$\frac{k + k(k-1)}{k + (k^2) - k} = k$$

$f(\text{same}) + f(\text{diff})$

$f(n-2, k-1)$

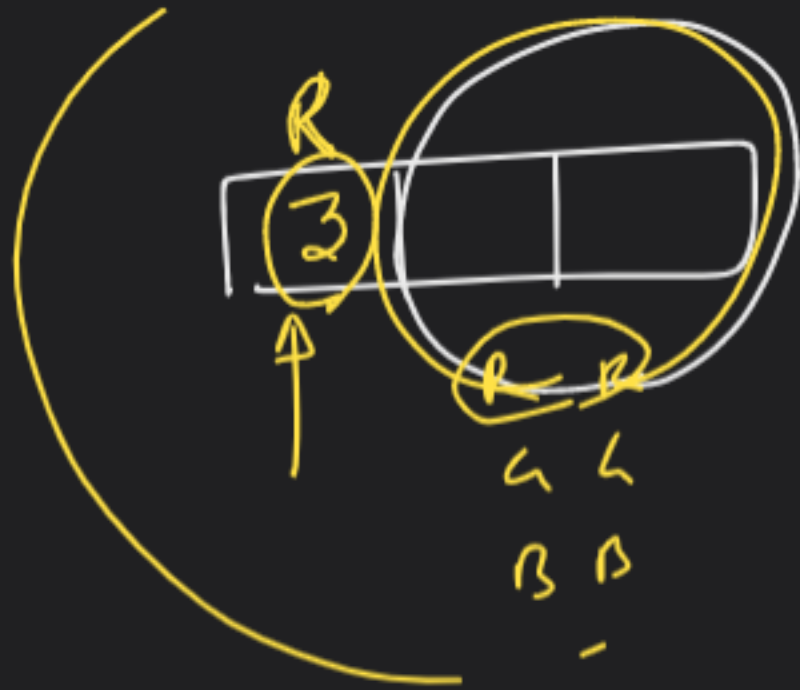
+

$f(n-1, k-1)$



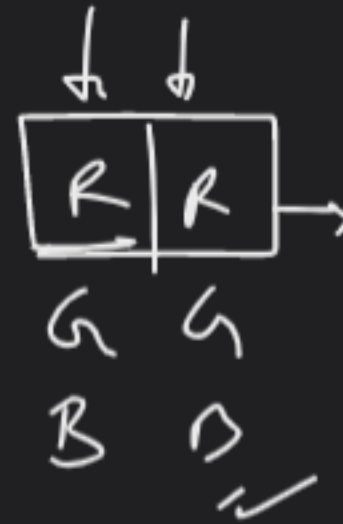
same

R R
L L
n n



$\begin{matrix} L & L \\ B & B \end{matrix}$

Answer



$K=3$



$\begin{matrix} L & B & B \\ \hline L & B \end{matrix}$

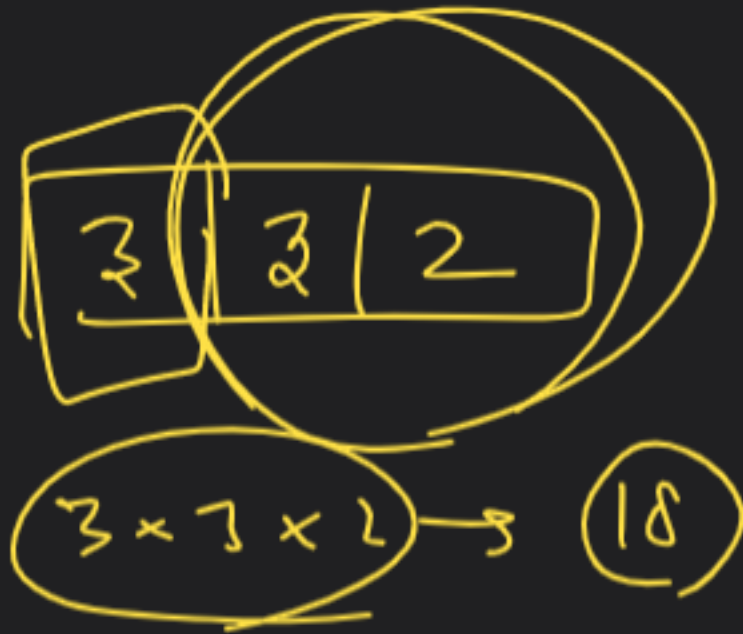
$K=3$



$\begin{matrix} R & B & B \\ \hline R & L & L \end{matrix}$

$\begin{matrix} B & R & R \\ \hline L & L \end{matrix}$

$\begin{matrix} L & L \\ R & B \\ B & R \\ B & L \\ L & R \\ L & B \end{matrix}$



$$\text{solve}(n, k) = [\text{same}] + [\text{diff}]$$

$$\text{solve}(n, k) = \text{solve}(n-2, k) * (k-1)$$

+

$$\text{solve}(n-1, k) * (k-1)$$

9

$l \leftarrow 1$

$LL \rightarrow BB$

RR

LL

BB

RR

BB

LL

BB

BB

$\rightarrow RR, BB$

$\rightarrow RR, LL$

$\rightarrow RR, BB$

$\rightarrow LL, RR$

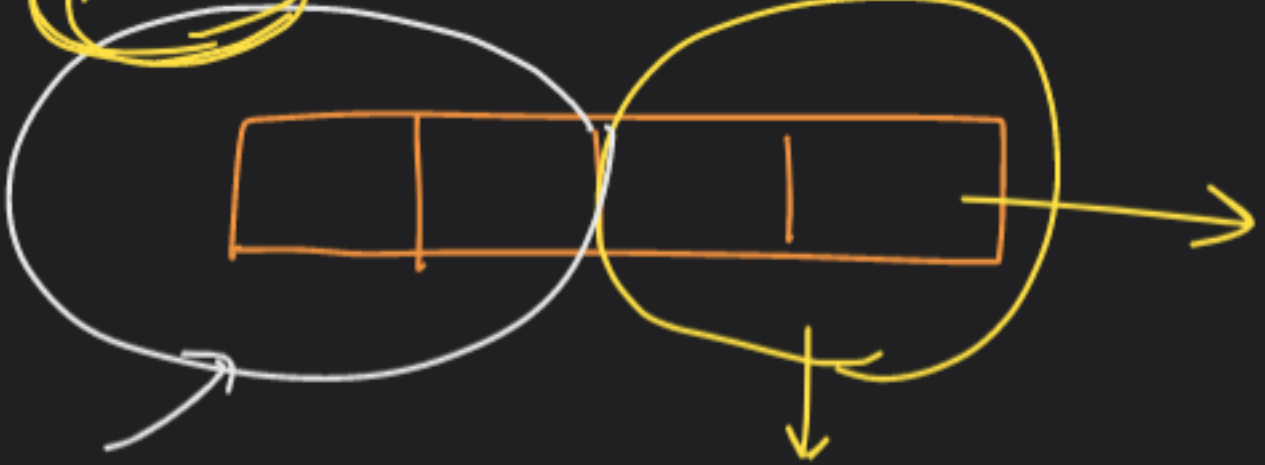
$\rightarrow LL, BB$

$\rightarrow RR, LL$

$\rightarrow BB, LL$

$\rightarrow BB, RR$

$n \geq 2$



LL

$RR = \alpha$

LL

BB

$f \leftarrow$

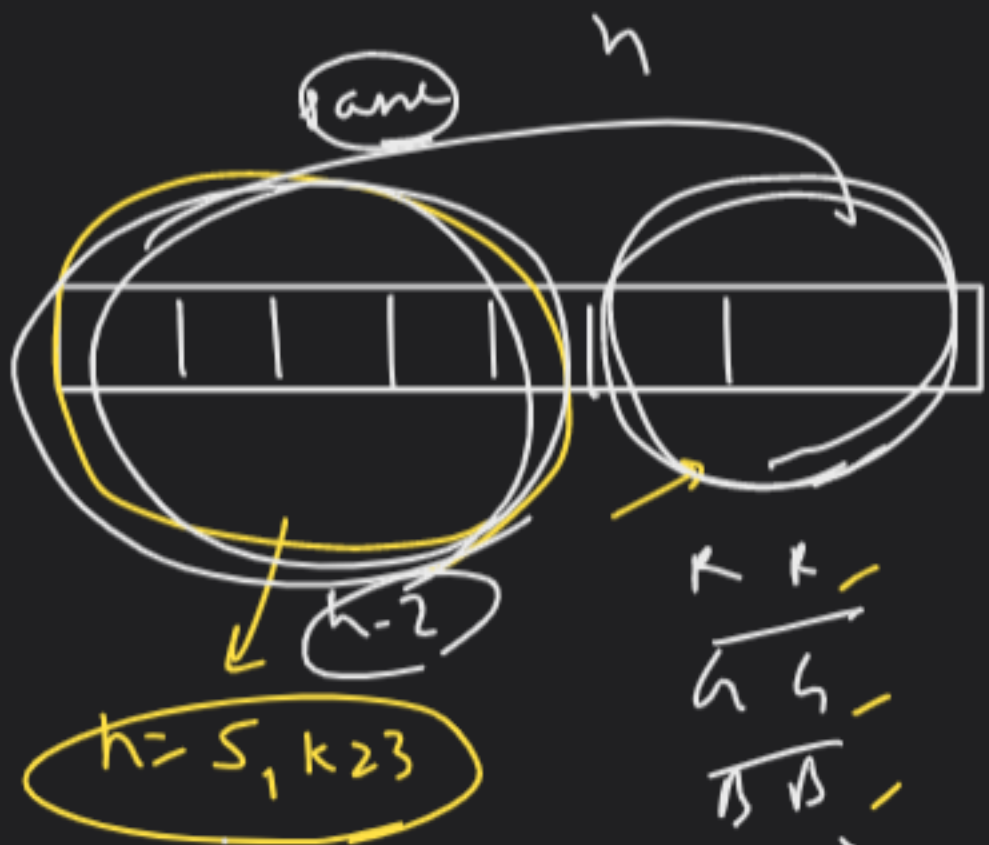
$$\frac{n-1}{k-2}$$

$k-1$

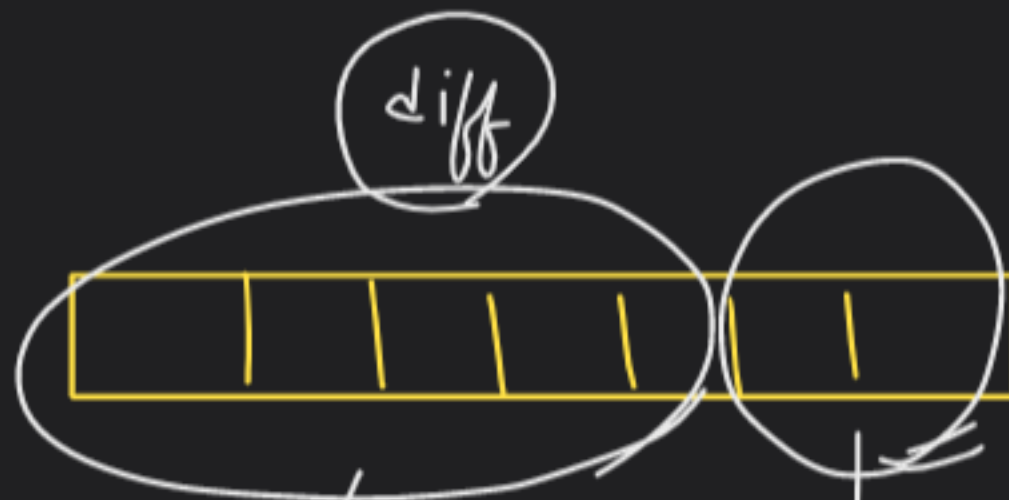
B.C

$$n=7$$

$$k=3$$



$$\begin{array}{r} k \quad k \\ \hline h \quad h \\ \hline B \quad B \end{array}$$



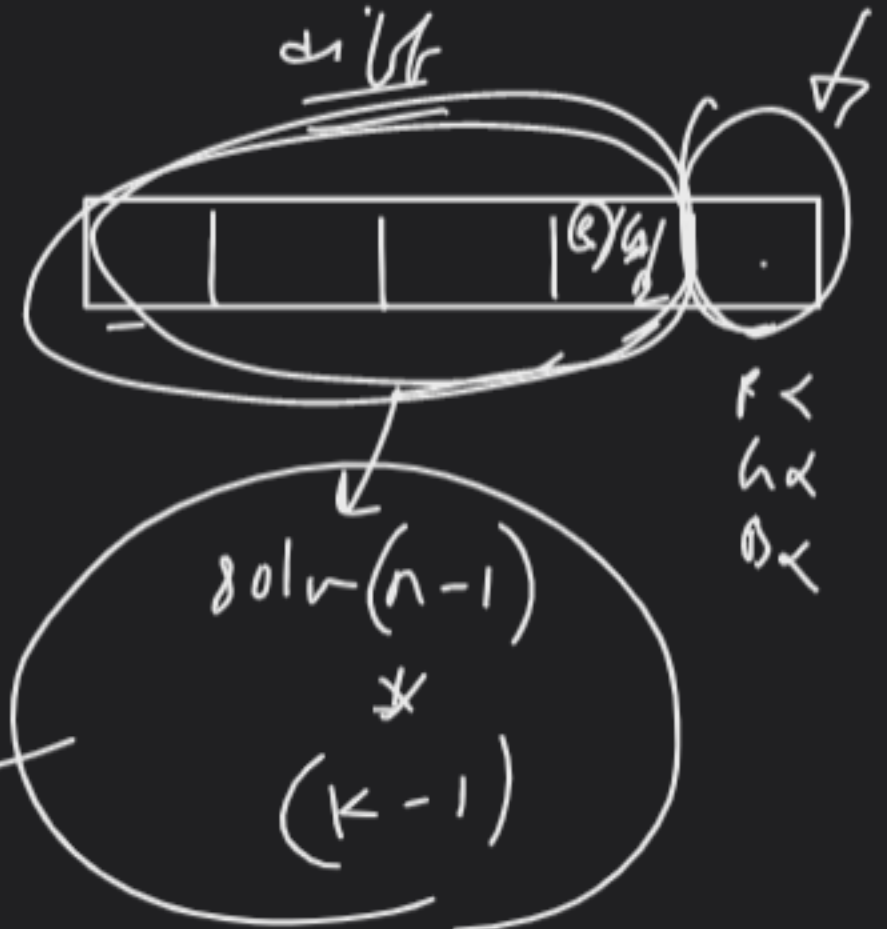
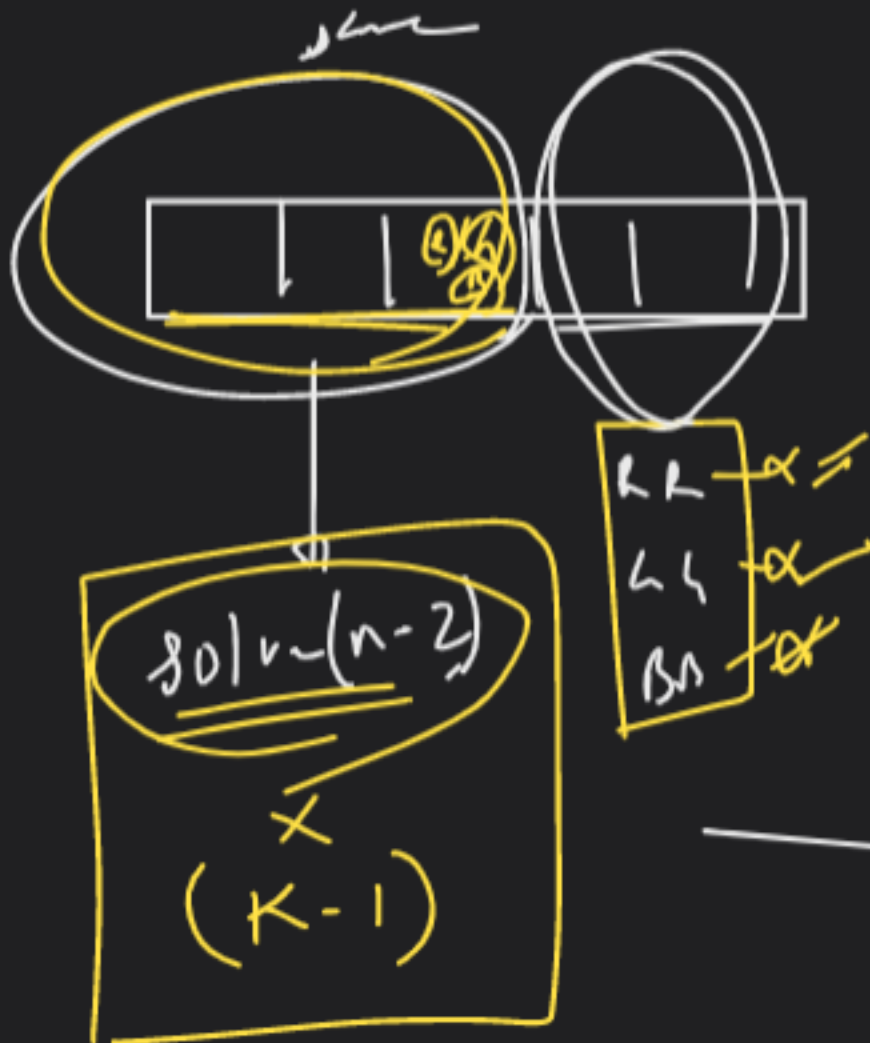
$$h=5, k=3$$

$$\begin{array}{r} k \quad k \quad k \\ \hline R \quad R \quad R \end{array}$$

total ans

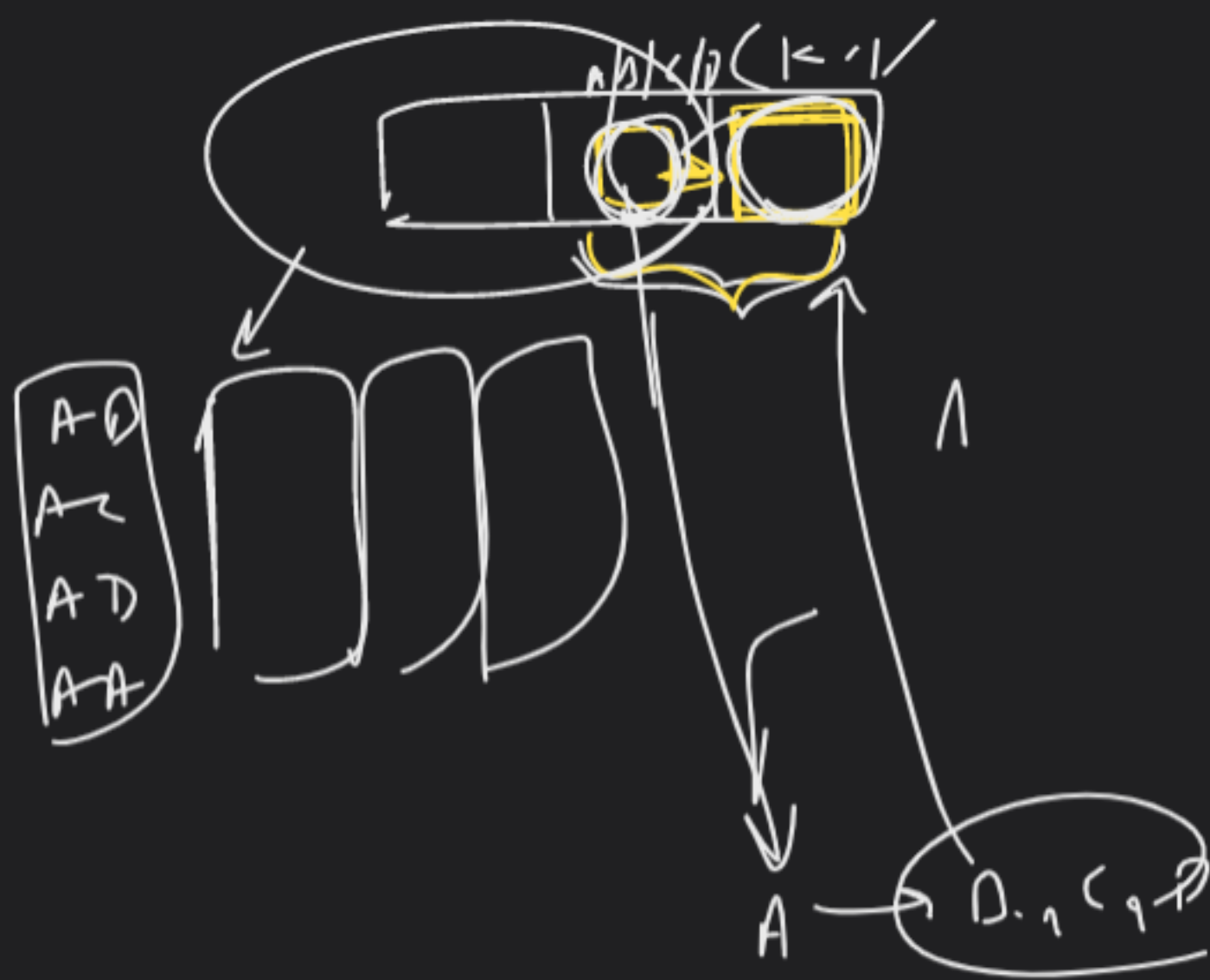
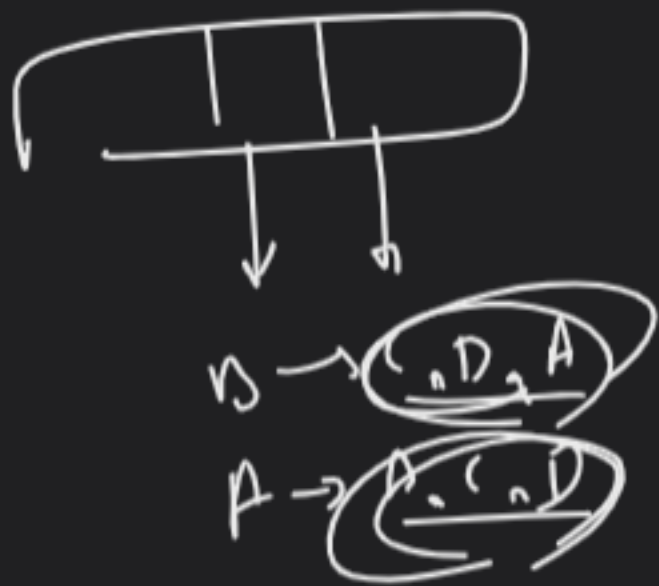


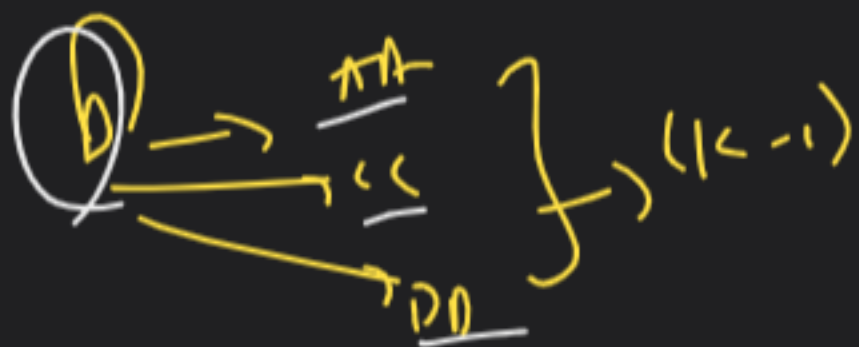
$n = 5$
 $k = 3$



$(+)$ ~~find~~ find ans

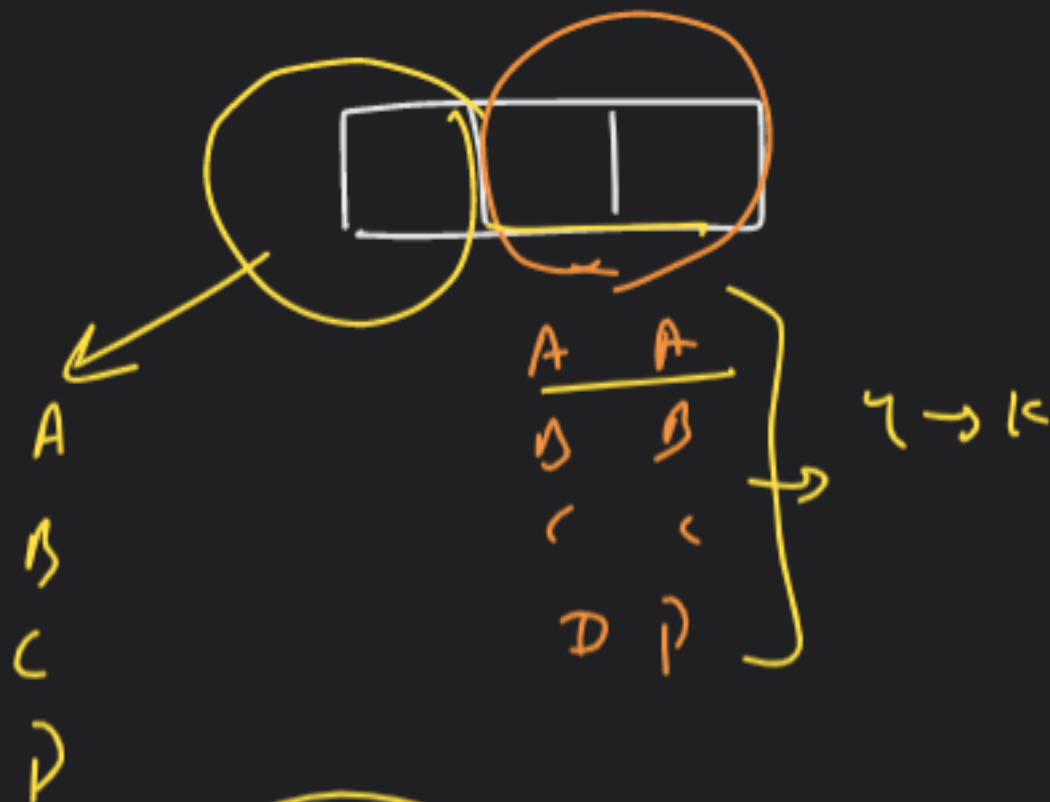
$k \rightarrow 4$	$n = 1$	$n = 2$	$n = 3$	$n = 4$
<u>same</u>		k	$k \times (k-1)$	$k^2 \times (k-1)$
<u>diff</u>		$k \times (k-1)$	$k^2 \times (k-1)$	$(1) \times (k-1)$
total	$\rightarrow k$	$k + (k \times (k-1)) = k^2$	$k \times (k-1) + k^2 \times (k-1)$	





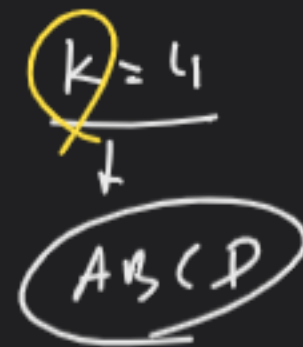
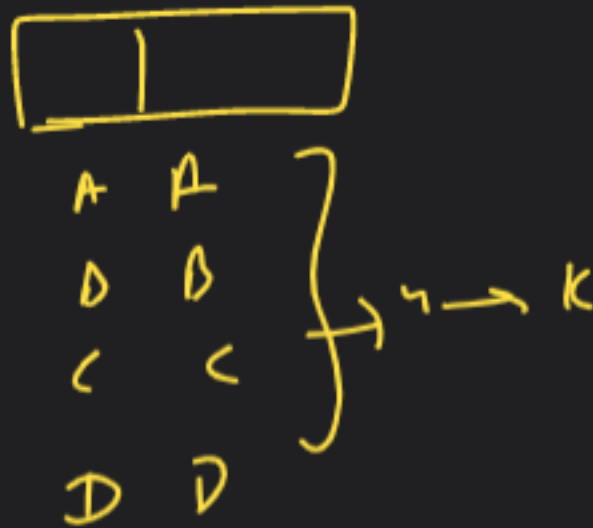
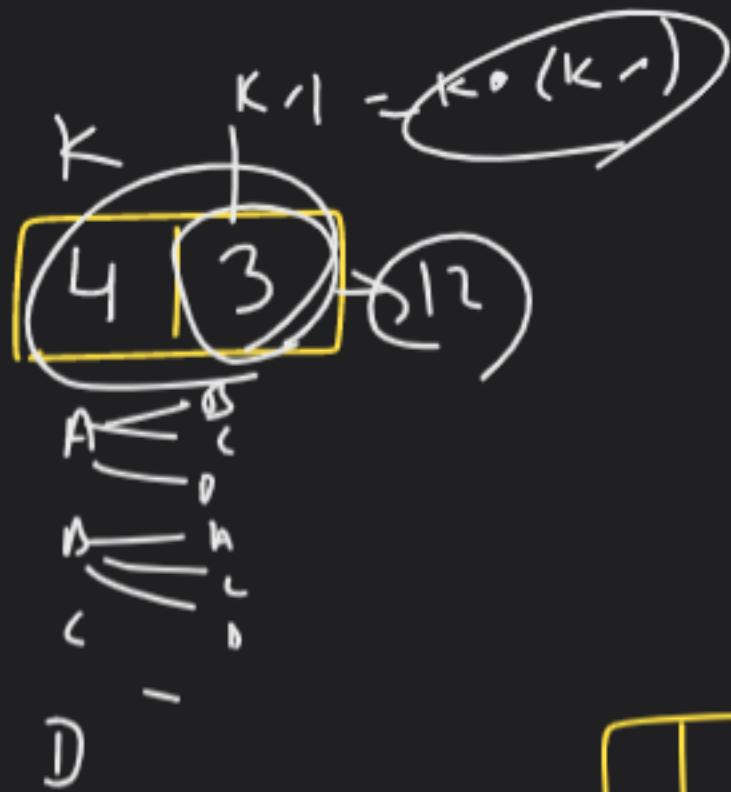
$$C \rightarrow AA, BB, DD \rightarrow (1/k-1)$$

$$D \rightarrow AA, BB, CC \rightarrow (1/k-1)$$



$$k \rightarrow (k-1)$$

$$\frac{AA A}{\alpha}$$





LAKshya.mishra51
@gmail.com

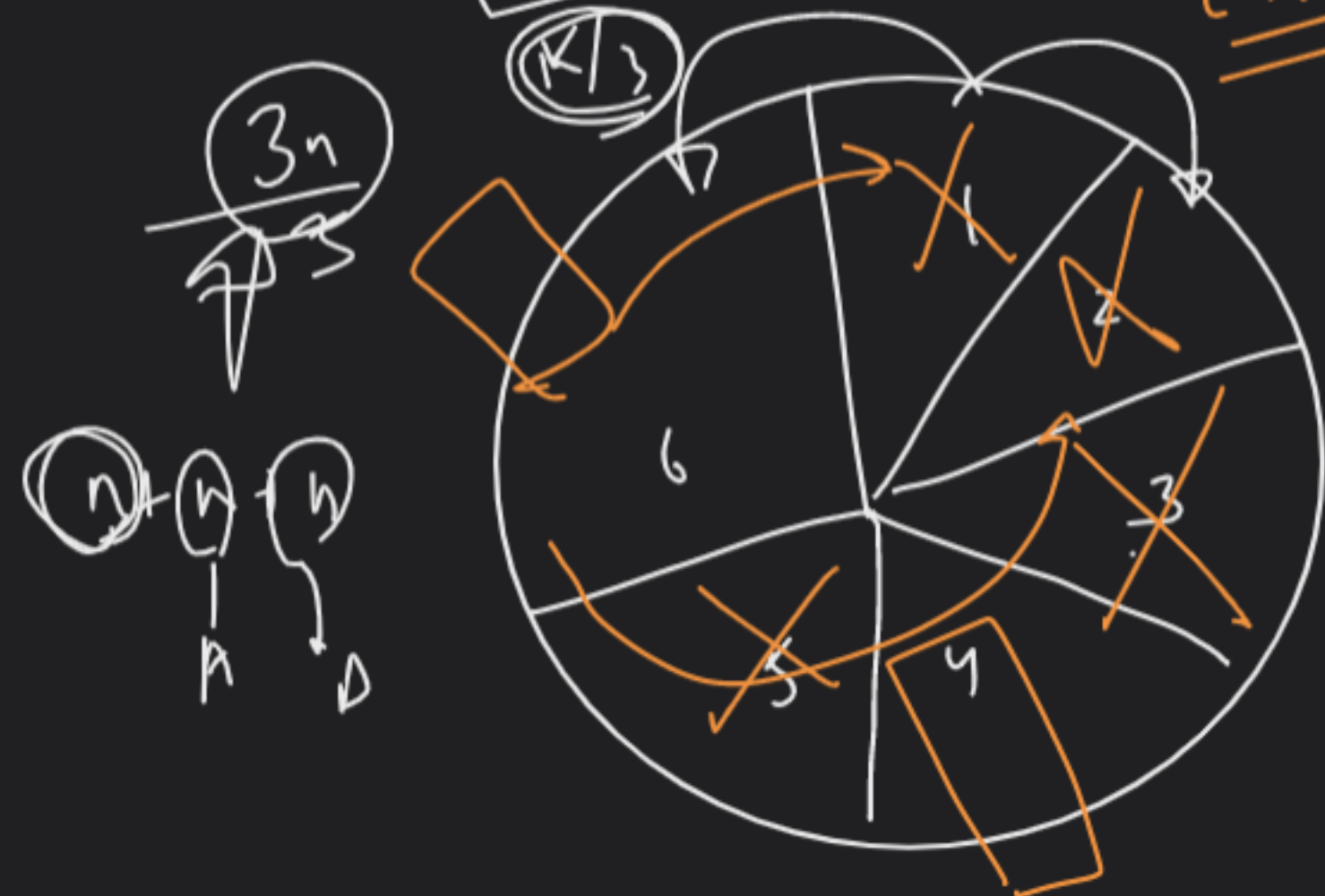
LAKshya.mishra56
@gmail.com

(2) Pizza with $3n$ slices \rightarrow

None & rubbing
Adjacent

$K = \text{slice size}()$

circular



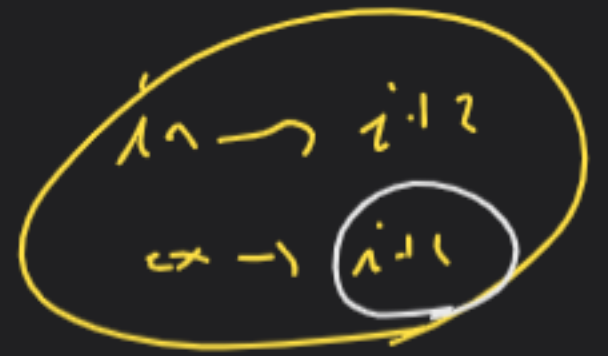
$$\text{Sum} = [4] + [6] \rightarrow 10$$

u/r

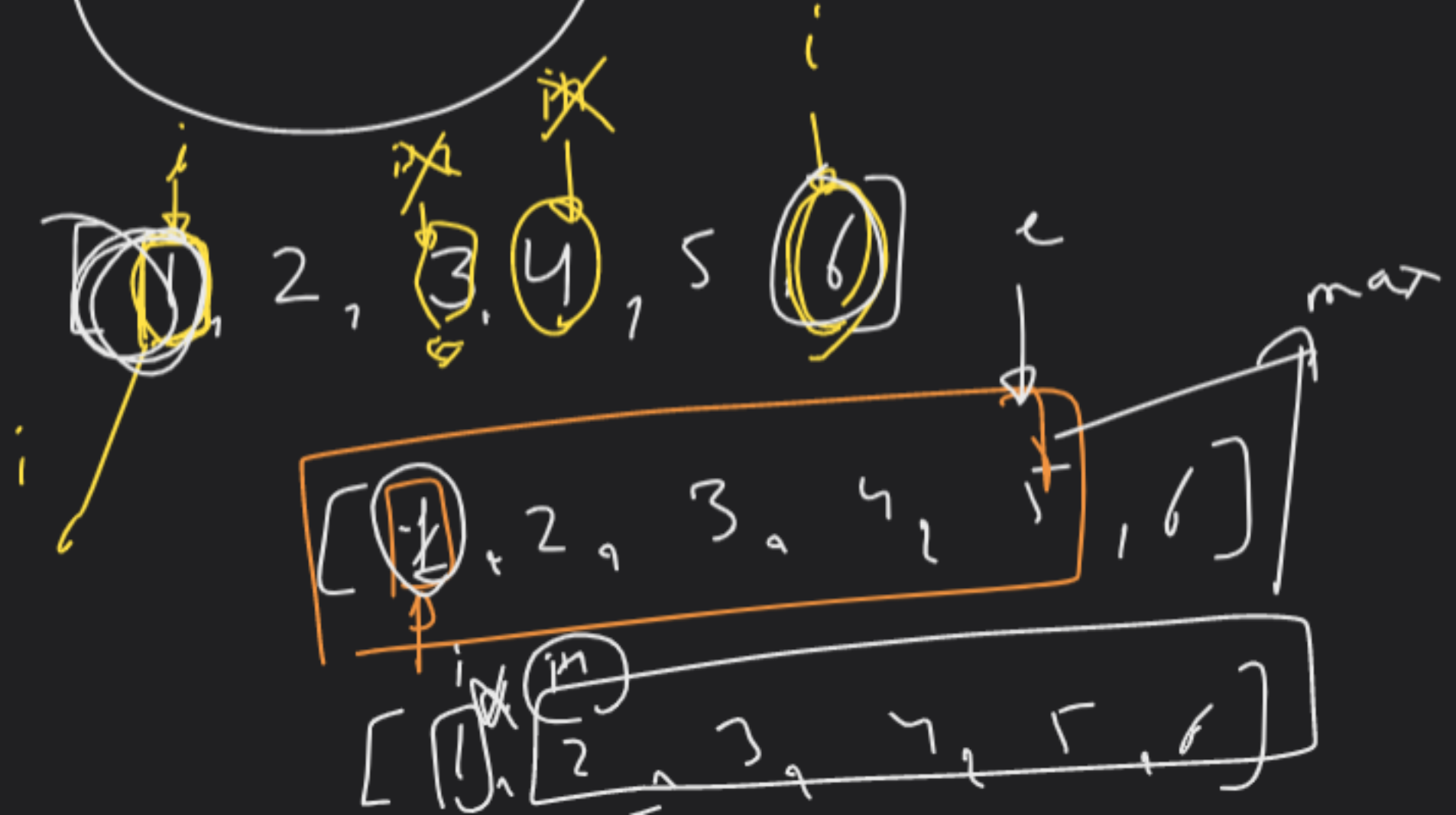
0, 1, 2, 3, 4

0, 1, 2, 3, 4

slice \rightarrow



solve(slice,
start,
end,
)



ind

1	2	3	4	5	1
0	1	2	3	4	5

ind
0th
↓

Δ

4th
↓

$C[7021N-2]$

total size

6

6-2

1	2	3	4	5	6
2	3	4	5	6	

1st
CX

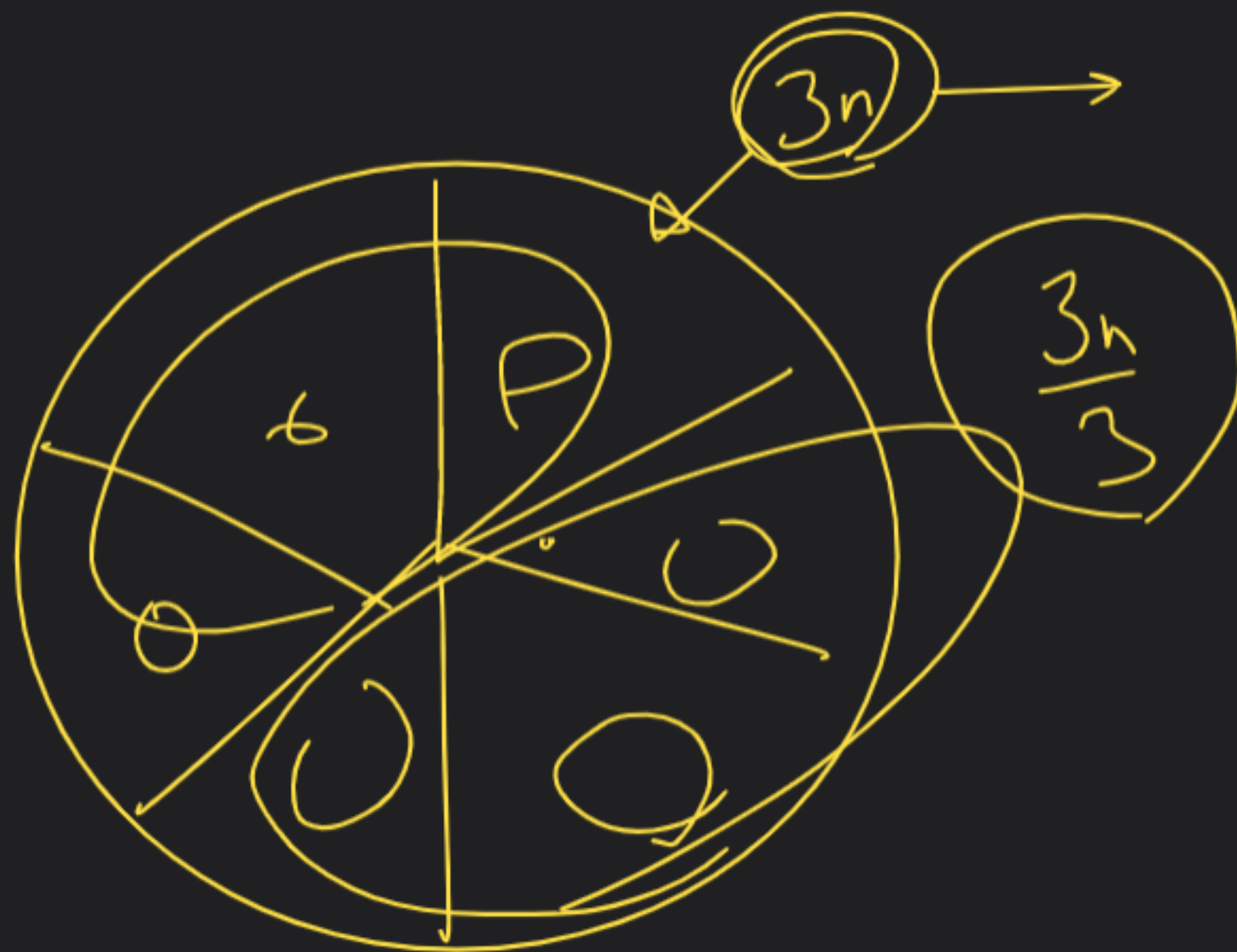
$\lambda = 1$

$C[25]$

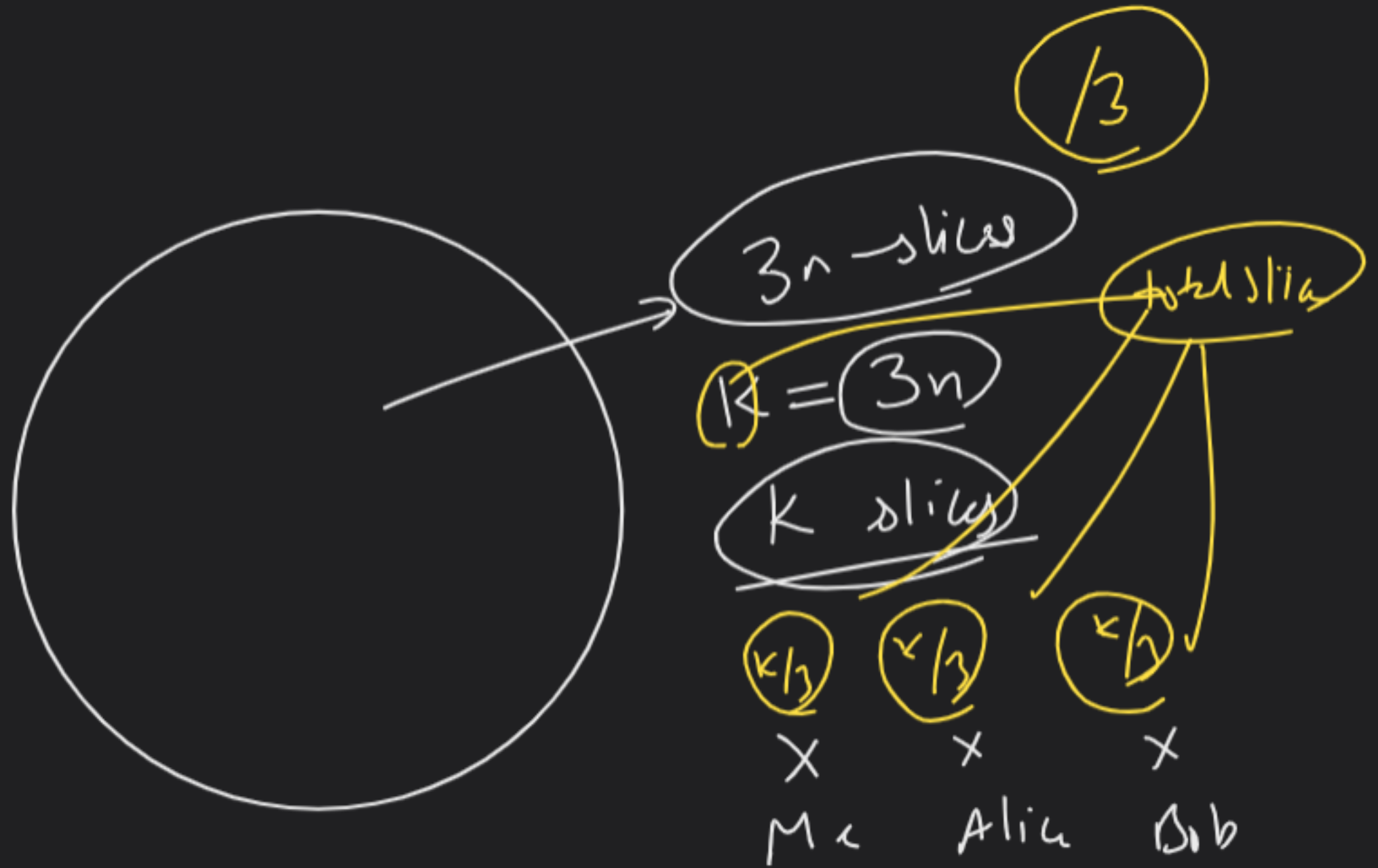
total size

6

6-1









1	2	3	4	5	6
---	---	---	---	---	---

Option 1 →

1	2	3	4	5	
0	1	2	3	4	

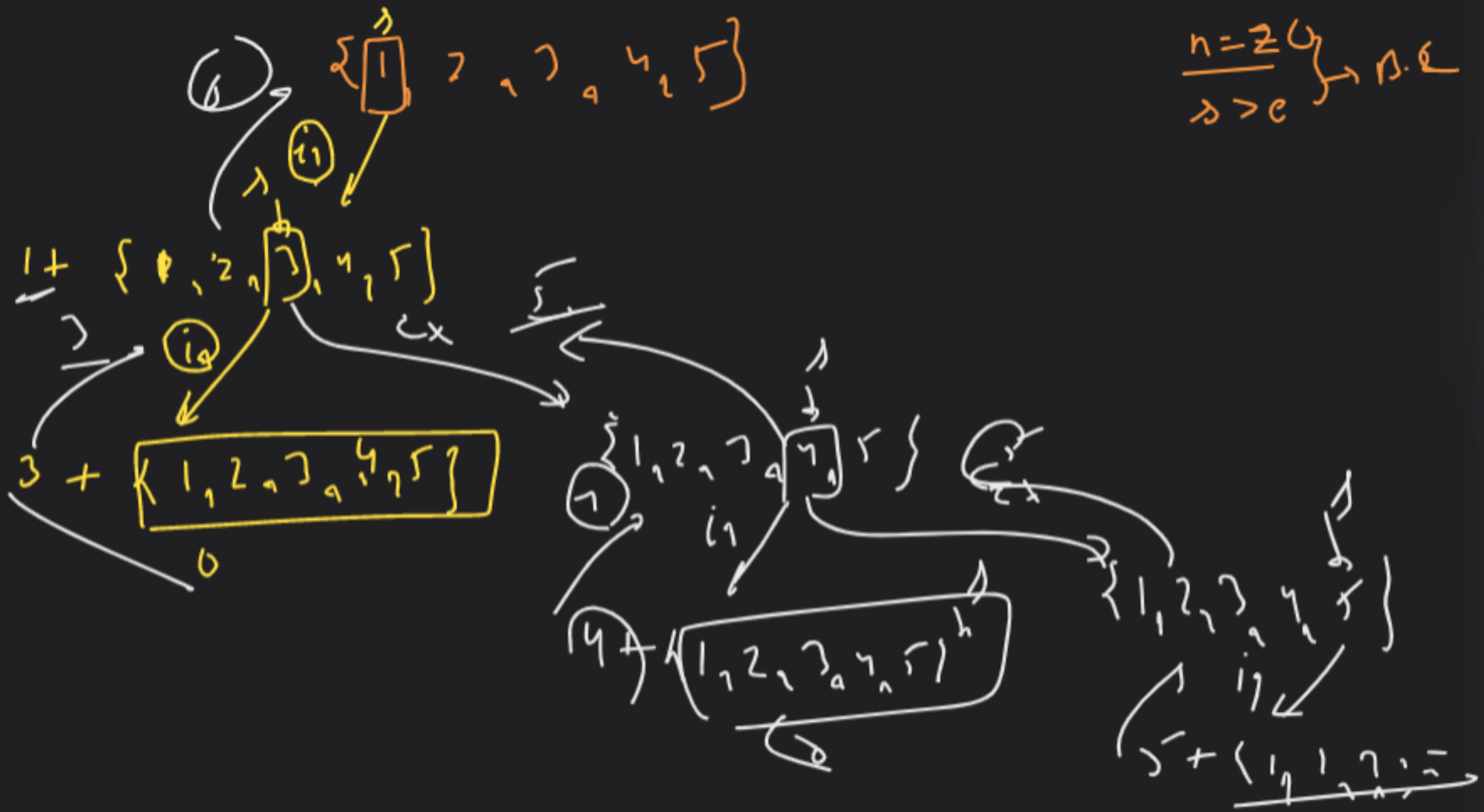
→ ans + 6 ^{max}
(10)

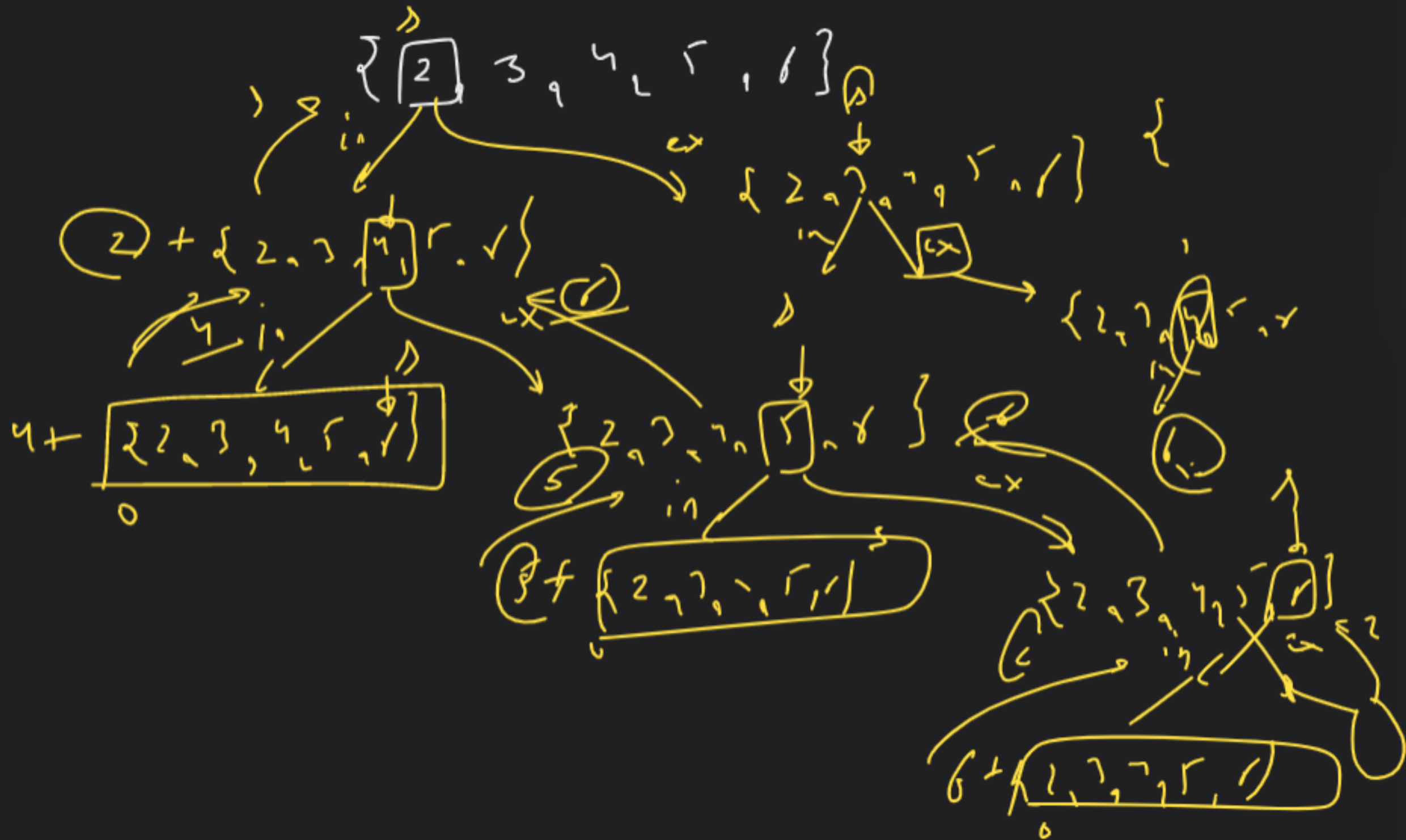
Option 2 →

2	3	4	5	6
2	3	4	5	6

→ ans → 10

$$\frac{n=20}{n>c} \rightarrow \text{B.E}$$





$\{ \overset{1}{\boxed{2}}, 3, 4, 5, 6 \}$

$\textcircled{2} \rightarrow i_1$

$2 + \{2, 3, \overset{1}{\boxed{1}}, 5, 6\}$

$10 \rightarrow i_2$

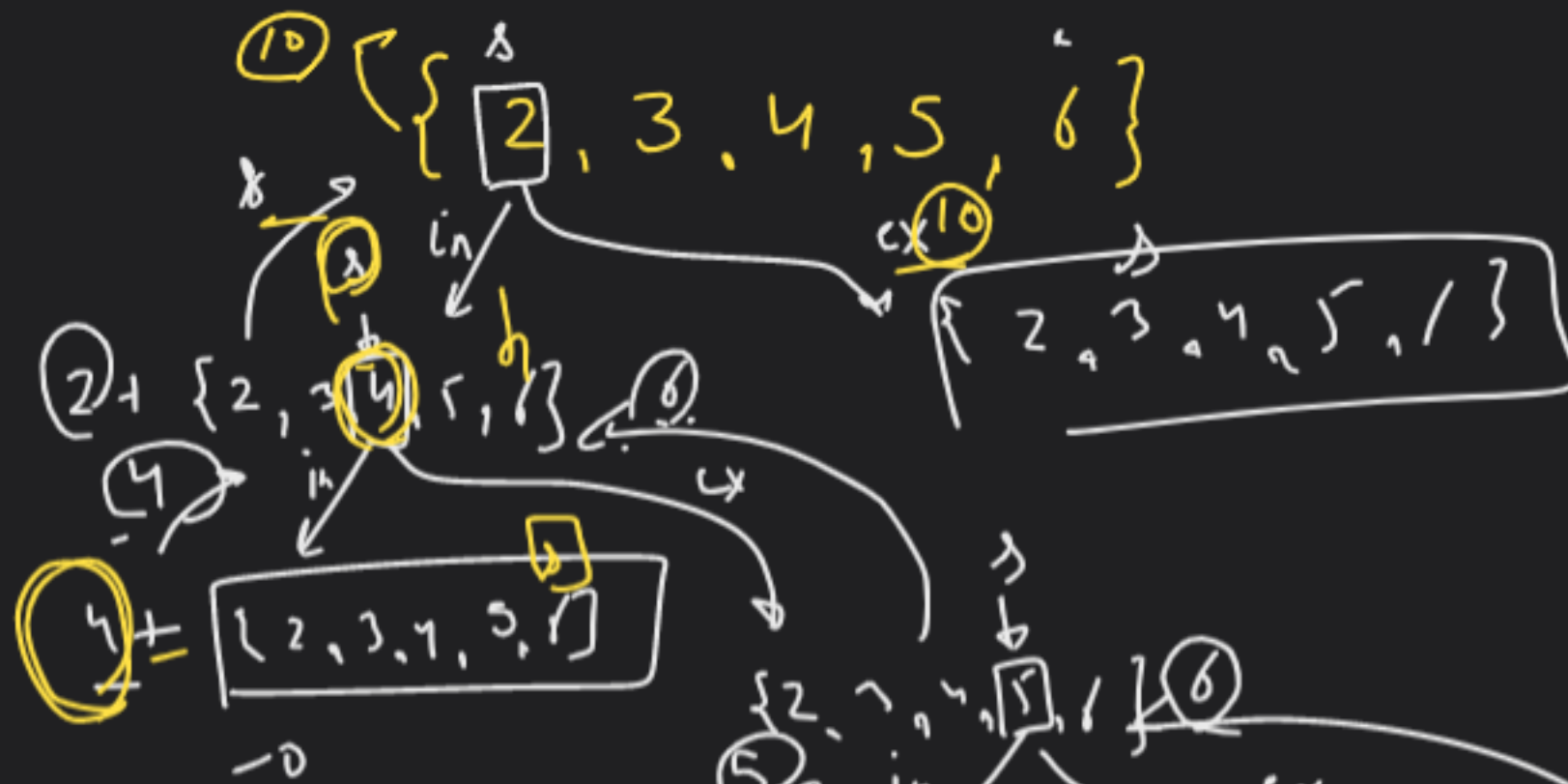
$\textcircled{4}$

$\{2, 3, 4, 5, \overset{1}{\boxed{1}}\}$

$C \rightarrow i_1$

$\textcircled{1} + \{2, 3, 4, 5, 6\}$





pizza

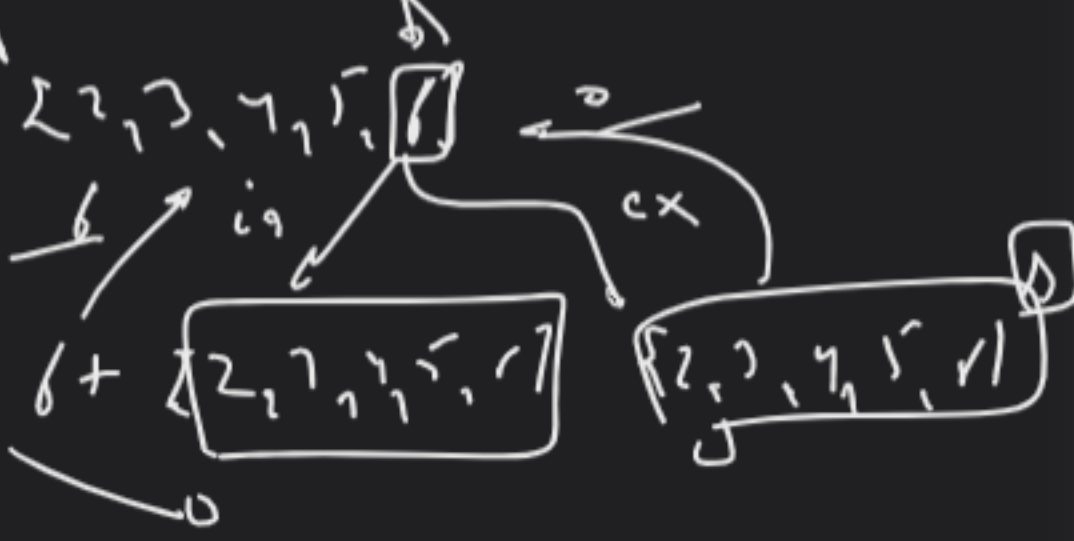
1st

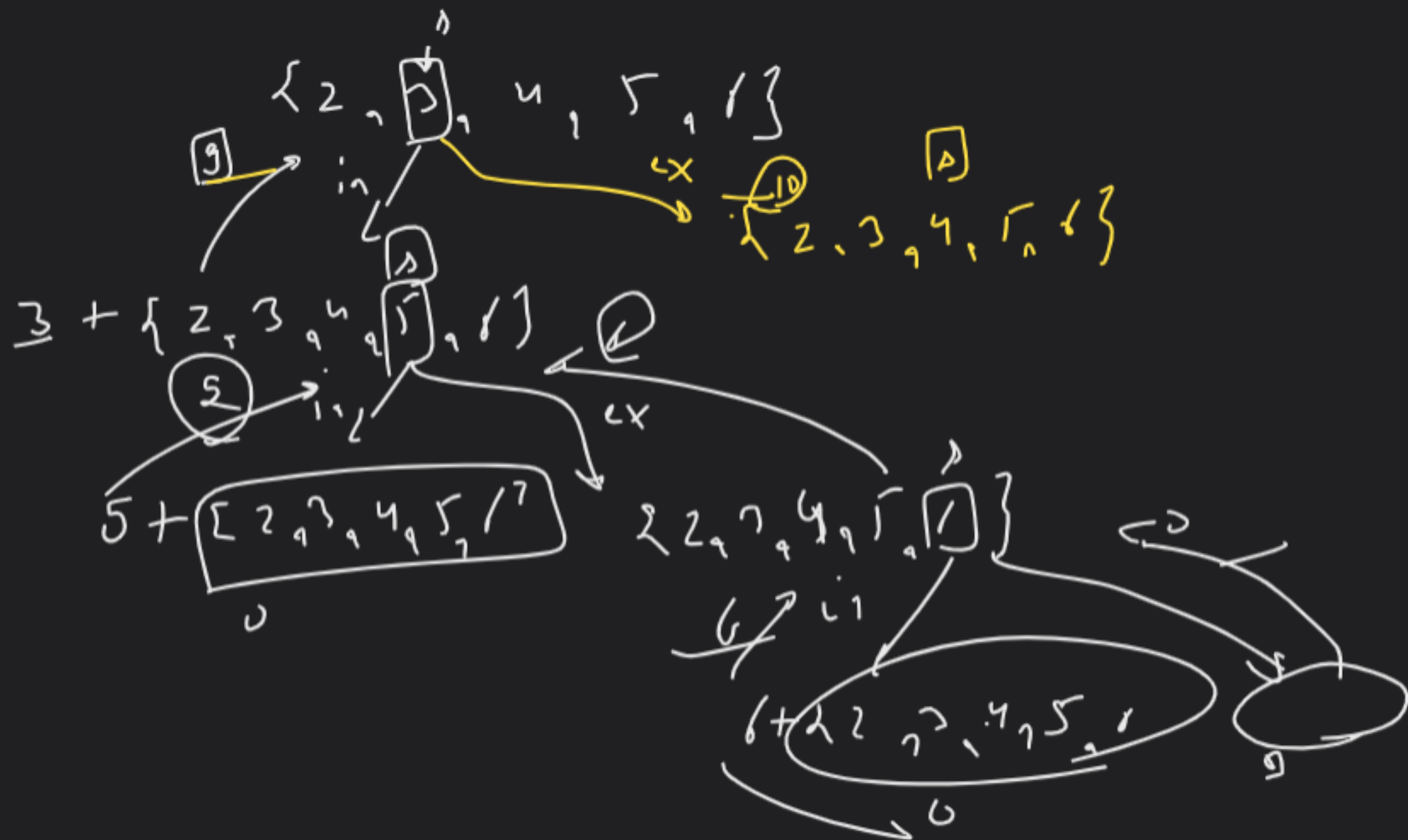
TLL Adv

in-include

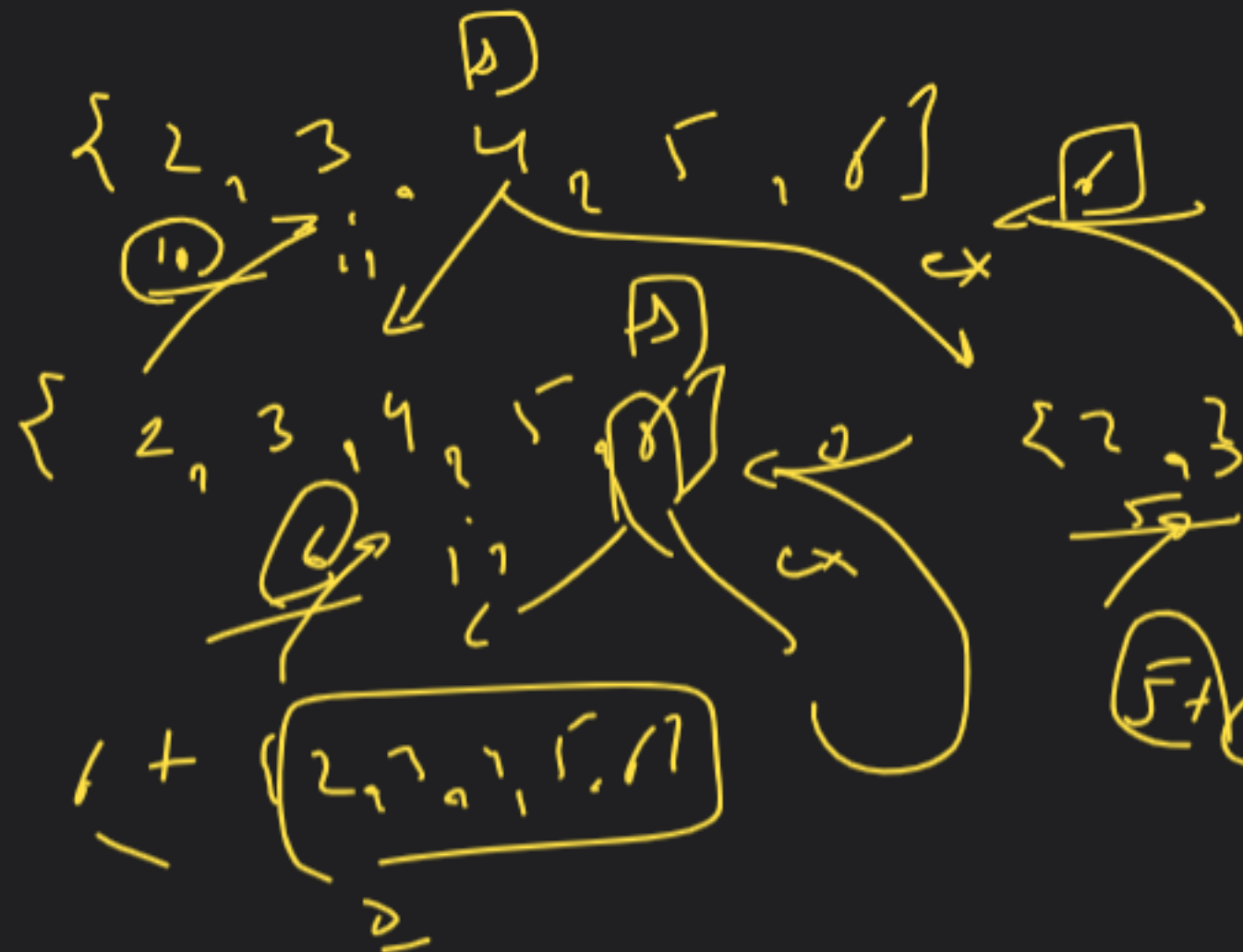
$$= \text{slice}[s] \pm \text{solv}(s+2, n-1)$$

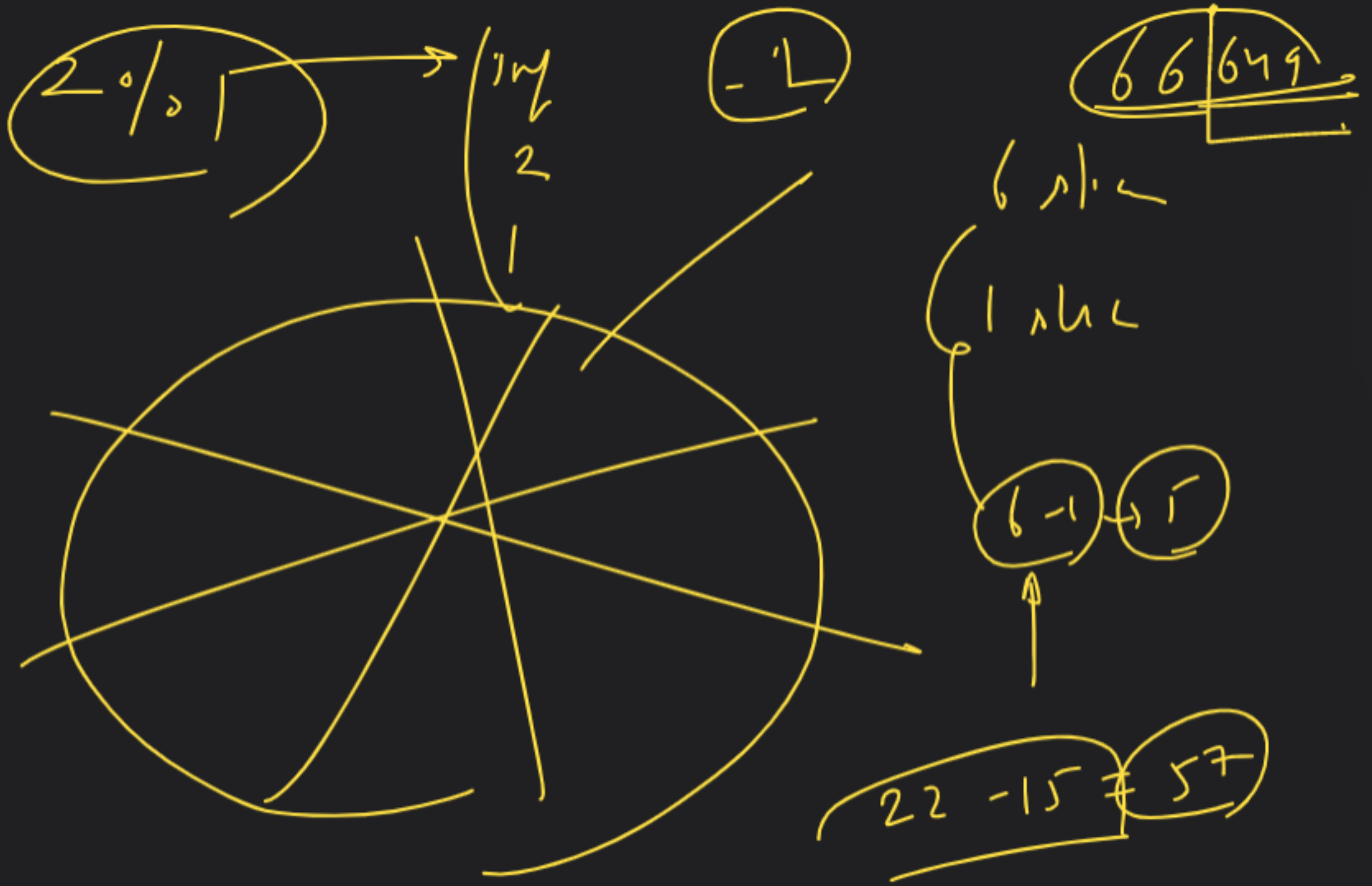
$$2-2 = 3000$$






4 +





~~int~~ ~~sw~~

int exclude =  + solu (~~h~~ + 1, c, h-1)

③ Max Height by Stacking Cuboids → Longest Inc Subsequence

c_1 c_2 c_3 c_4 c_5 c_6 c_7

12 pm

c_7
 c_6
 c_4
 c_1

$h_1 + h_4 + h_6 + h_7$

c_7
 c_2
 c_1 → condⁿ