4 -1, 2, 3, 7, 8, 9

-1, 2, 3

3, 2, -1

4, 5, 6, 7, 0, 1, 2

left (3)

0, 1, 2 4, 5, 6, 7

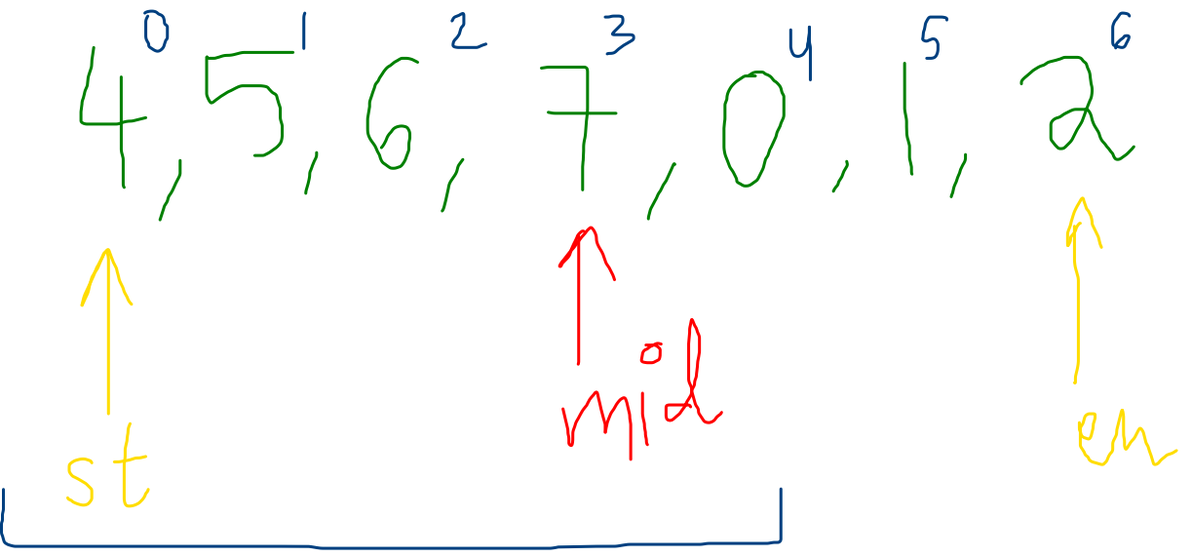
4, 5, 6, 7, 0, 1, 2

0, 1, 2, 4, 5, 6, 7

k = 2 (left)

Rotated

2, 4, 5, 6, 7, 0, 1

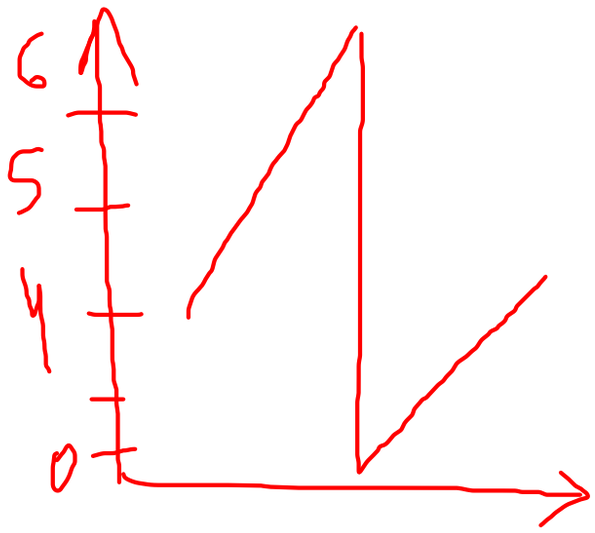


$k = 6$

if (arr[0] <= arr[mid])
    left part is sorted

else
    right part is sorted

arr[st] <= arr[mid]



4 5 6 7 0 1 2

0 1 2 3 4 5 6

st

end

k = 3

st > end

↳ STOP

mid

2 <= 3 && 3 <= 2

[1, 2]

2

[2, 3]

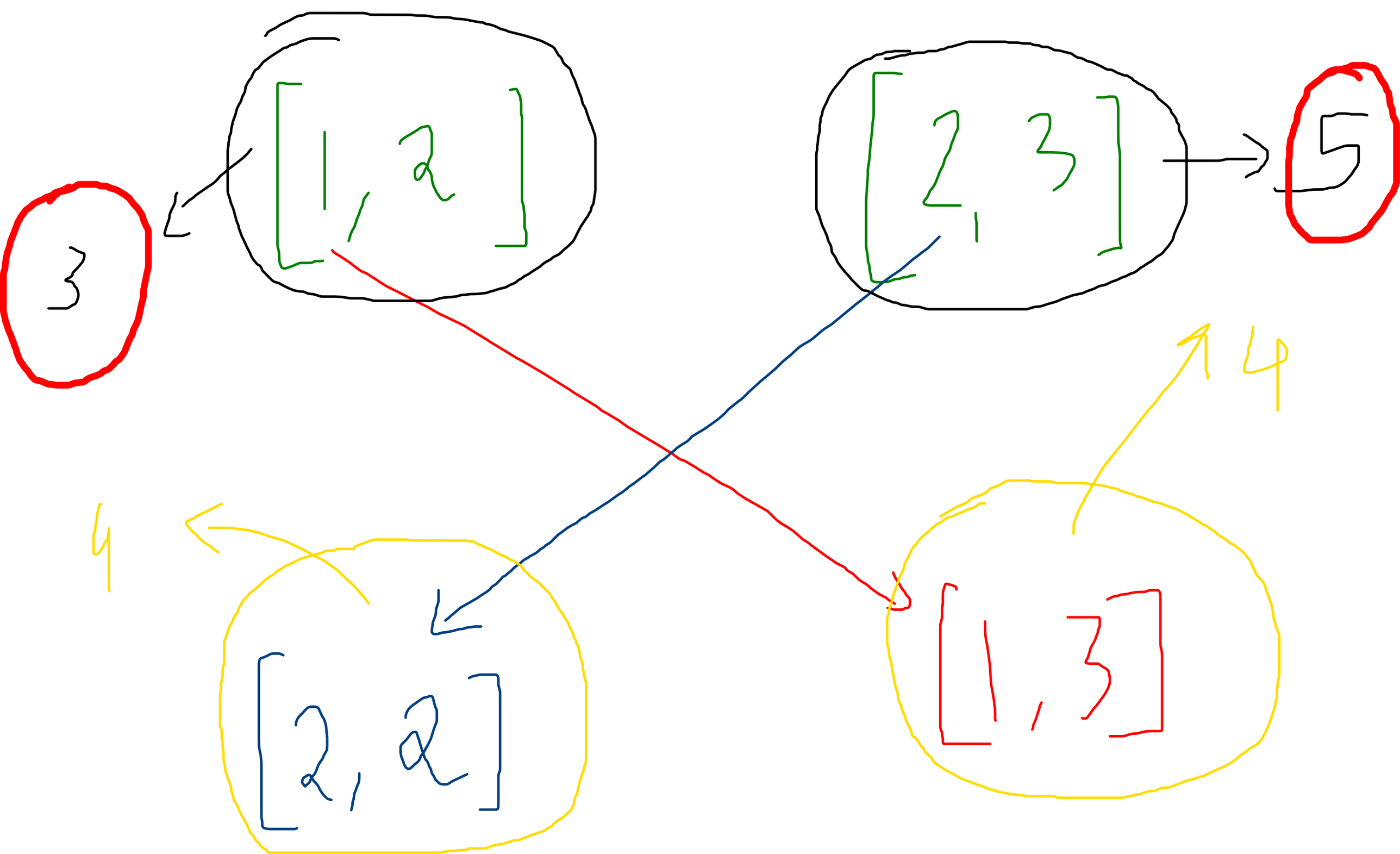
3

5

1

[2, 2]

[1, 3]


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

[1, 2]

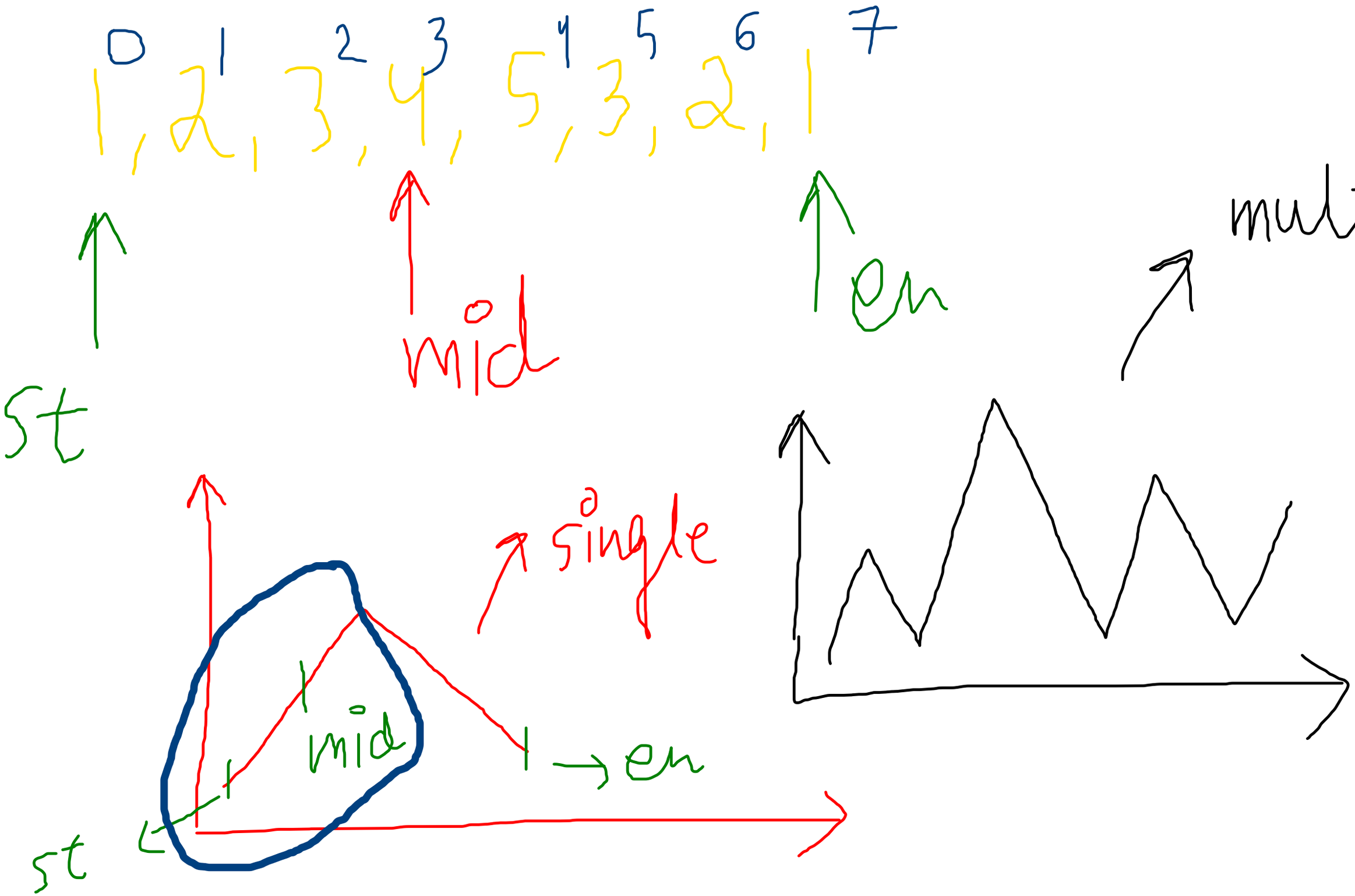
[2, 3]

3 - 1 = 2

4 - 2 = (2)

(Total Sum / 2)

4


0 1 2 3 4 5 6 7
1, 2, 3, 4, 5, 3, 2, 1
st
mid
en
multiple
single
mid
en
st

1, 2, 3, 4, 5, 3, 2, 1

0 1 2 3 4 5 6 7

st

end

mid

5

4

3

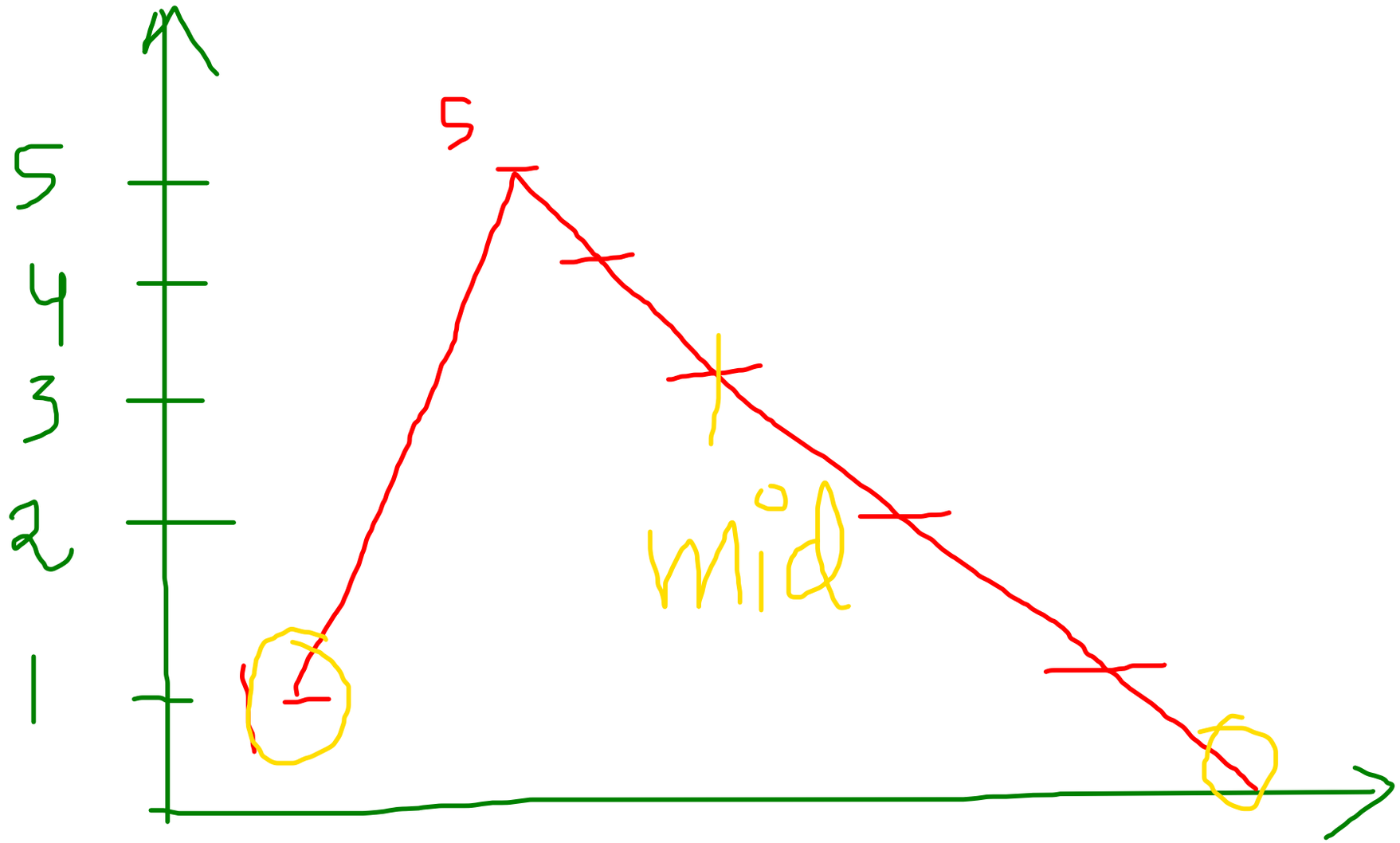
2

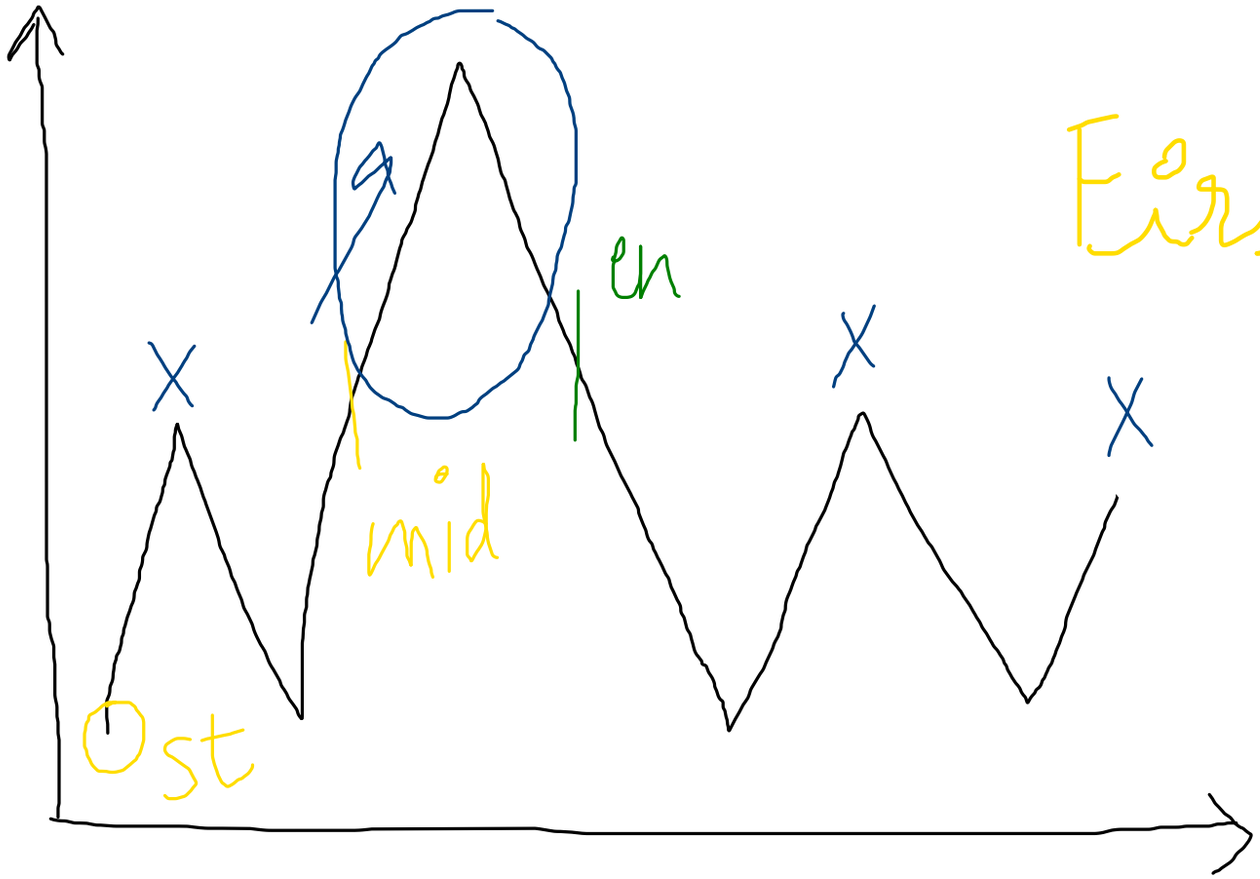
1

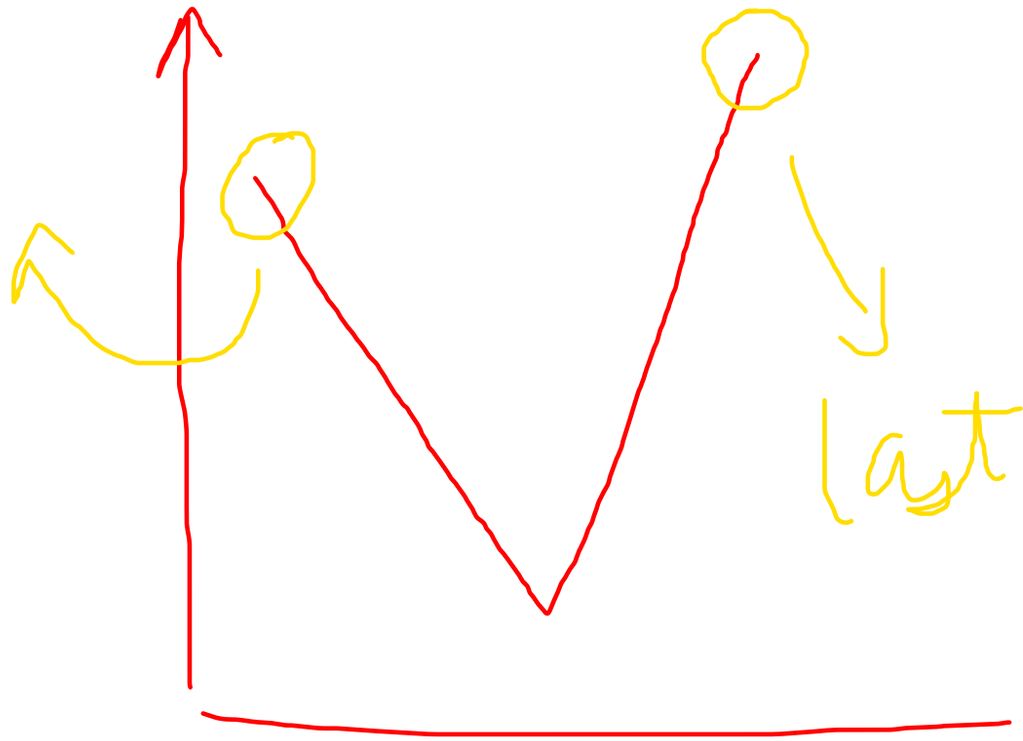
st

en

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







5, 4, 3, 2, 1, 7, 8, 9

1, 3, 4, 7, 2

12

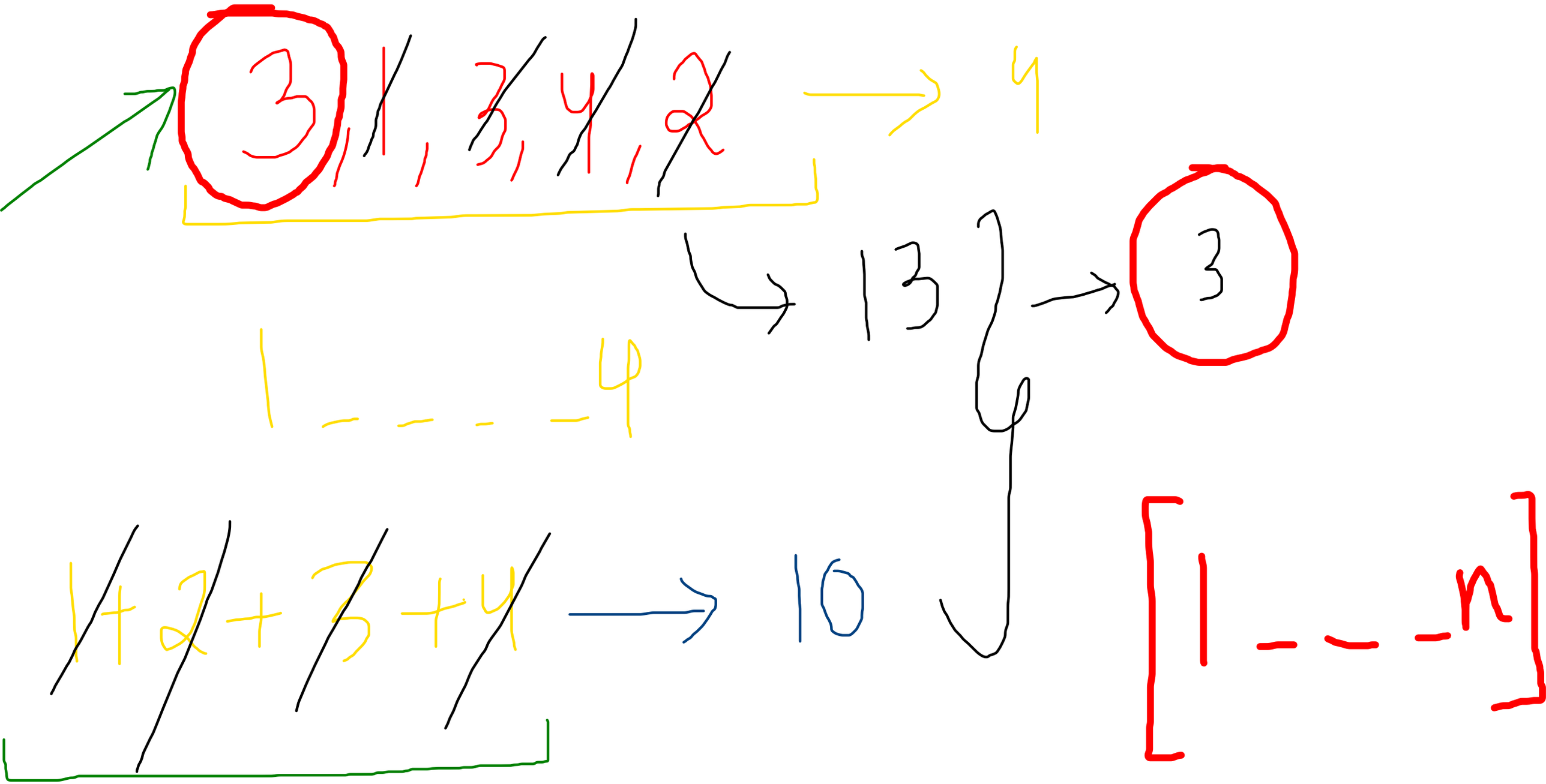
12 - 10

2

4

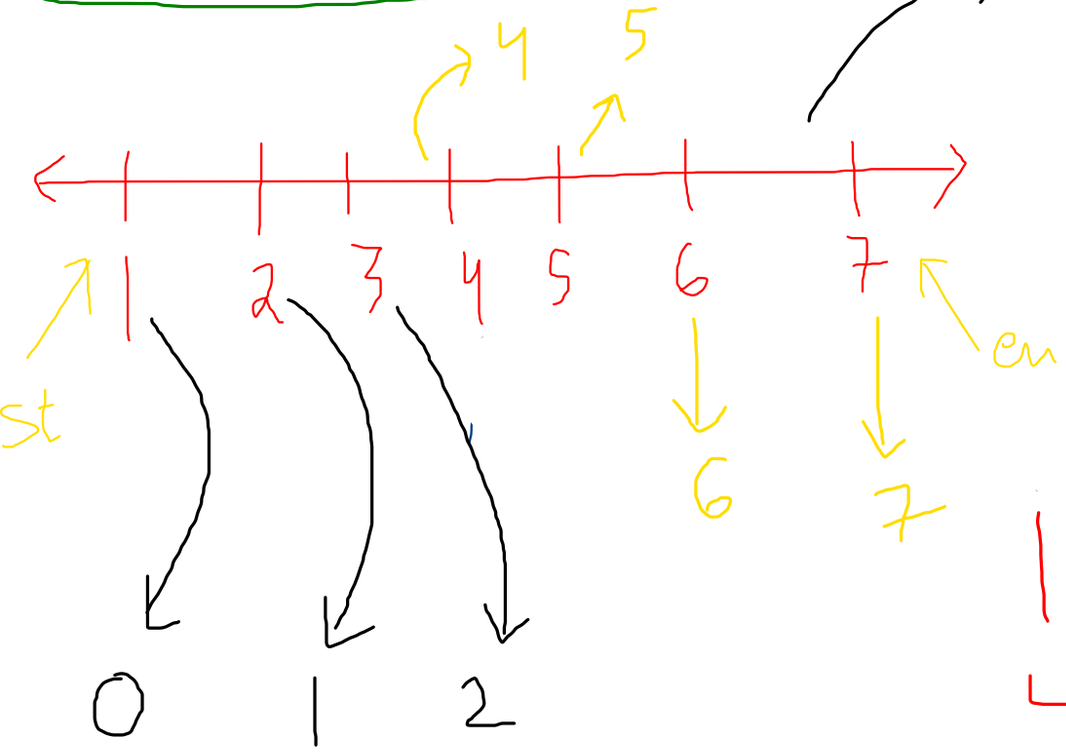
(1 + 2 + 3 + 4)

10

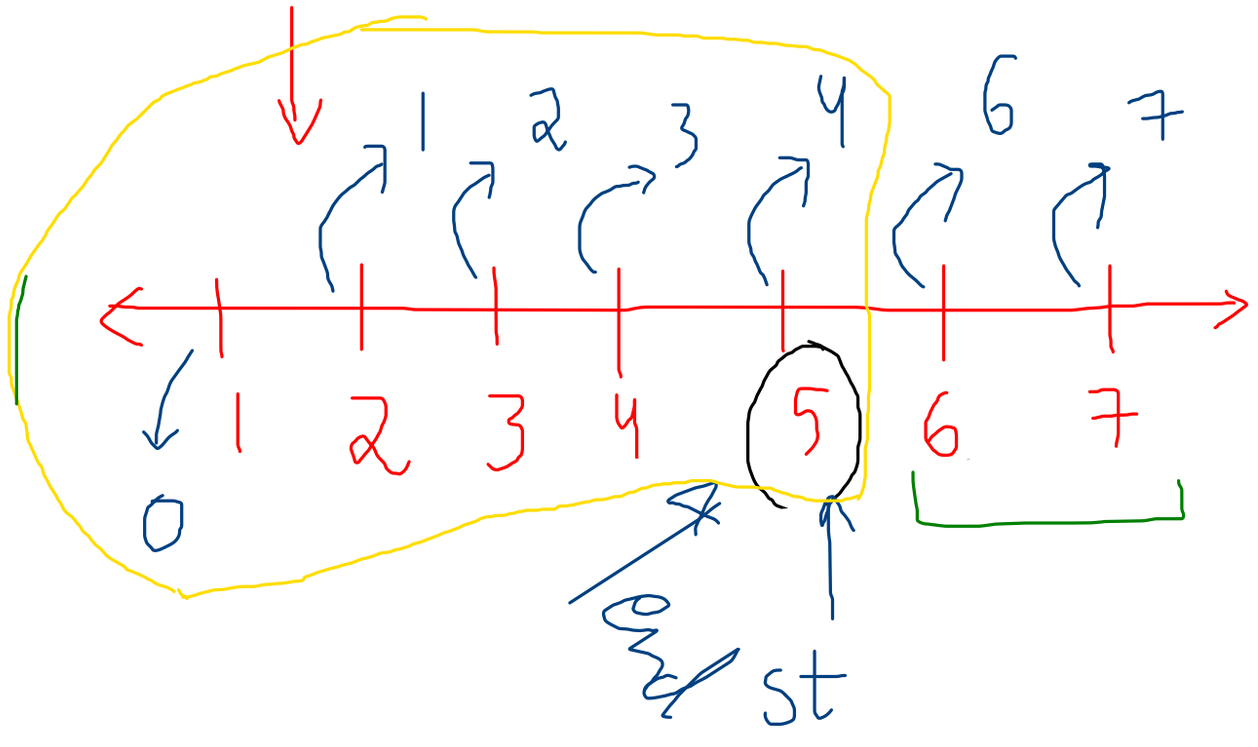

3, 1, 3, 4, 2
4
1 - - - - 4
13
3
1 + 2 + 3 + 4
10
[1 - - - n]

1, 3, 7, 6, 5, 3, 4, 2

Range



1, 3, 6, 5, 5, 4, 2, 7



Ans → 5

1, 2, 3, 6, 7, 7, 5, 4

ans = 4

6

st

en

mid

1 3 5 6 7 13 → n

2 4 8 10 → m

$\frac{n+m}{2}$

4

(1 --- 0 --- $\frac{n+m}{2}$)

st en mid

1 3 5 6 7 13

2 4 8 10

8 <= 5

1 2 3 4 8 5 6 7 10 13

1 4 7 8 _ _ _ 16

16

st mid en

4 * 4 = = 16

2 * 2 < 16

↳ right

8 * 8 > 16

↓ left

$a^2 + b^2 = c \longrightarrow 5$

$a < \sqrt{c}$ $b < \sqrt{c}$

$\sqrt{5}^2$

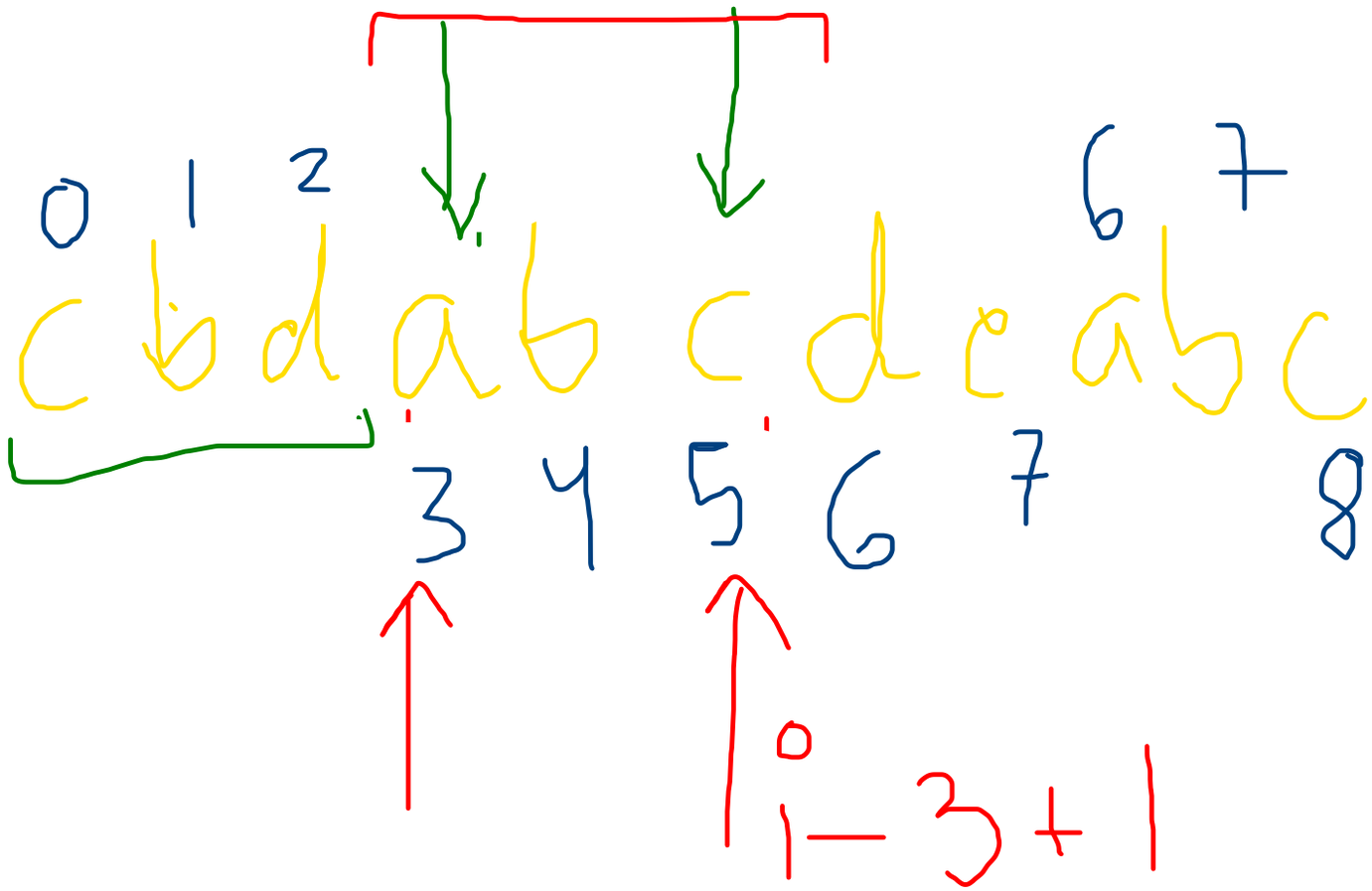
Range $c = 16$

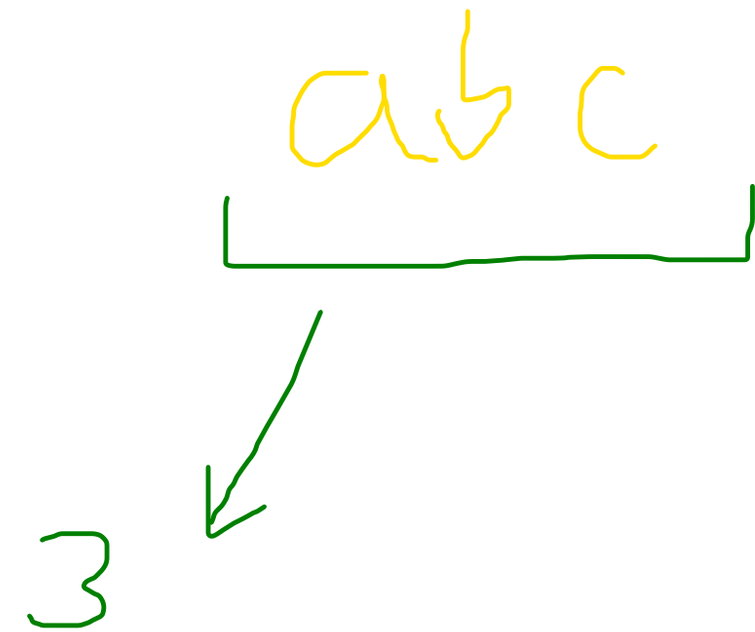
$(1 - - - \sqrt{c})$

$1, 2, - - \sqrt{c}$

$a^2 = c - b^2$

$a = \sqrt{c - b^2}$





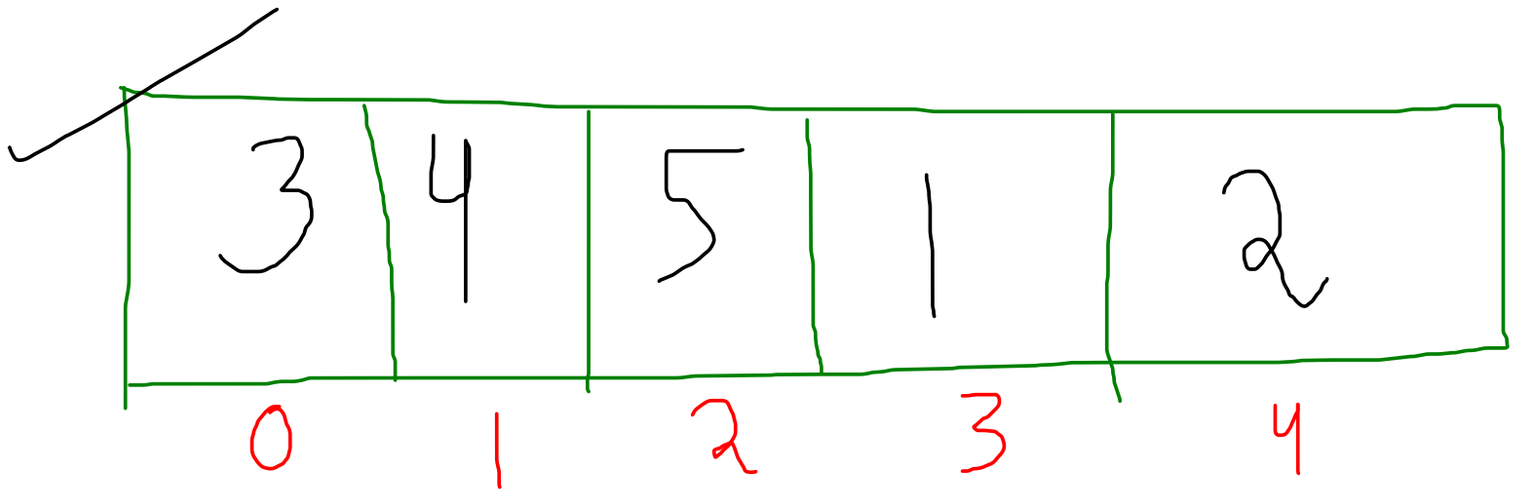
48 48

$$\frac{48}{48} = 1$$

$0 \%_0 5$

$1_{0+3}\ 2_{1+3}\ \underbrace{3_{2+3}}\ 4_{3+3}\ 5_4$

$k = 3$



$$\underbrace{res[(i+k)\%_0 n] = arr[i]}$$

3