

Divide and Conquer

Sunday, 15 March 2020

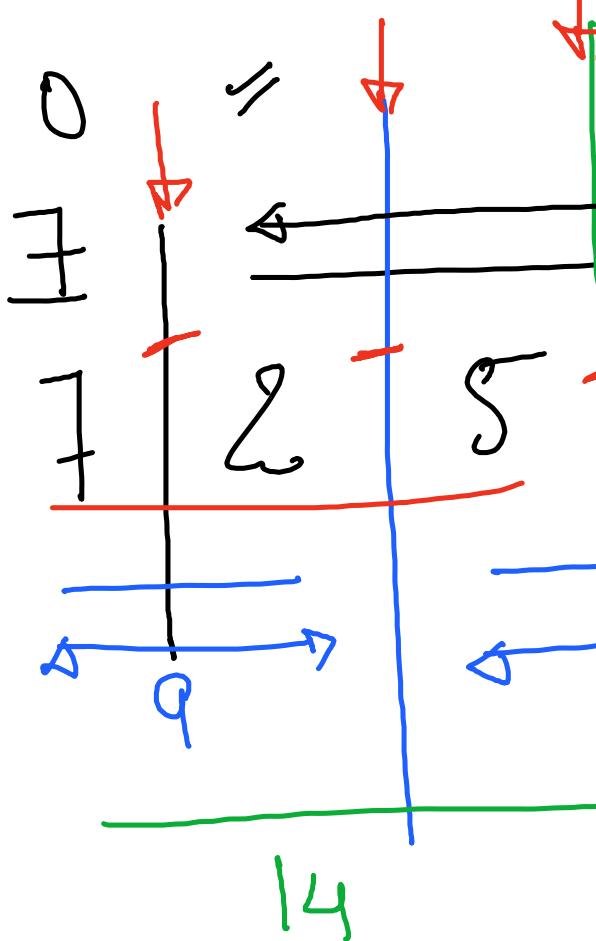
1:26 PM

Home work

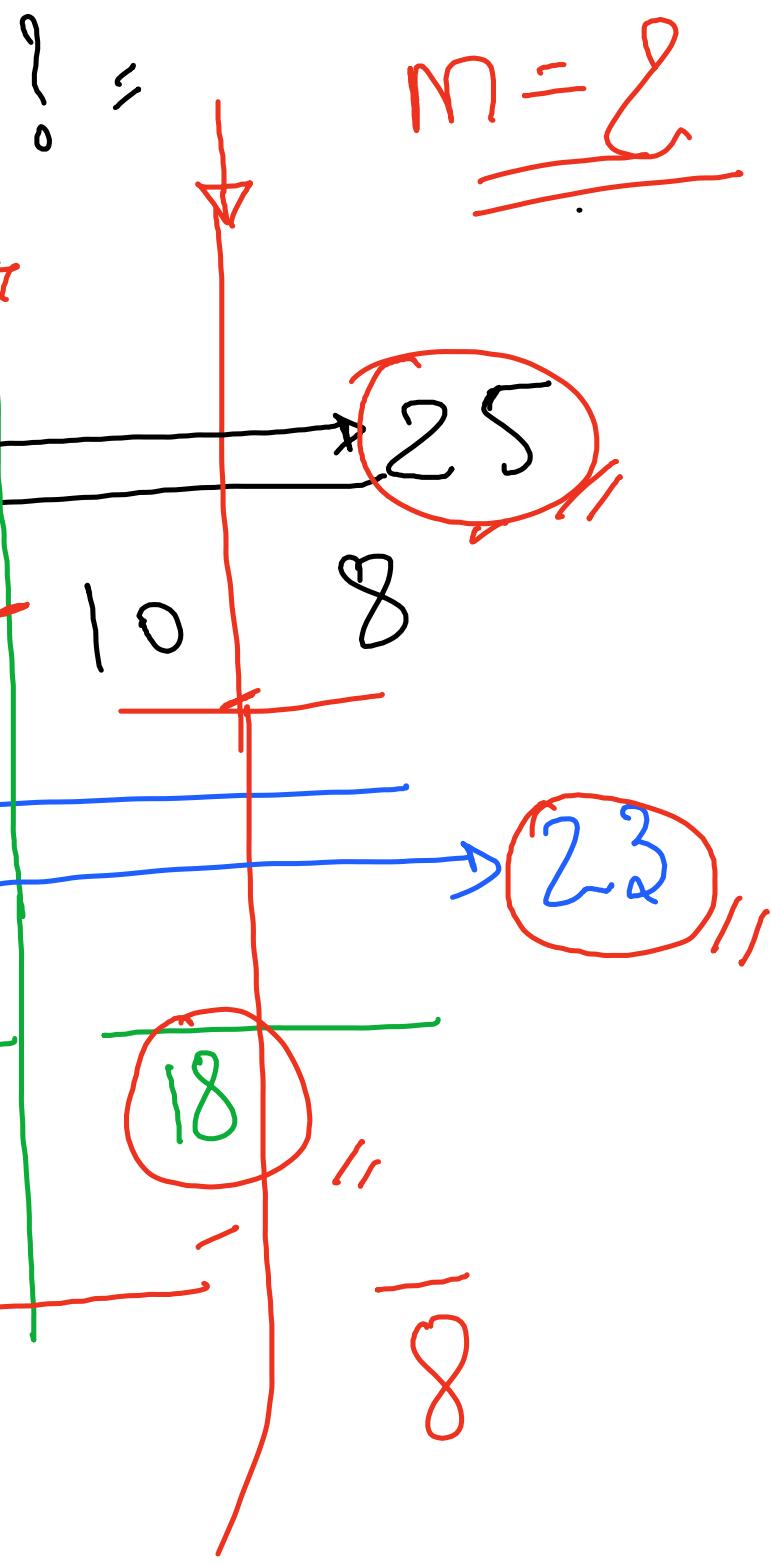
① upper bound \leftarrow doubt

② leetcode 410 \leftarrow

③



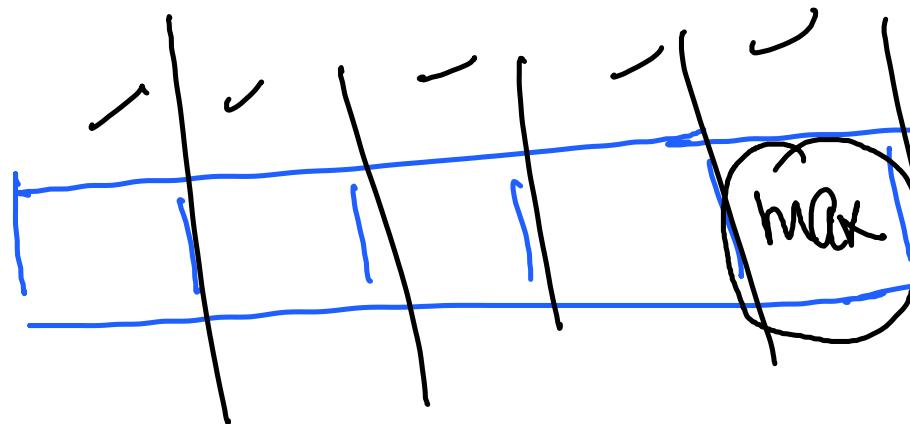
24



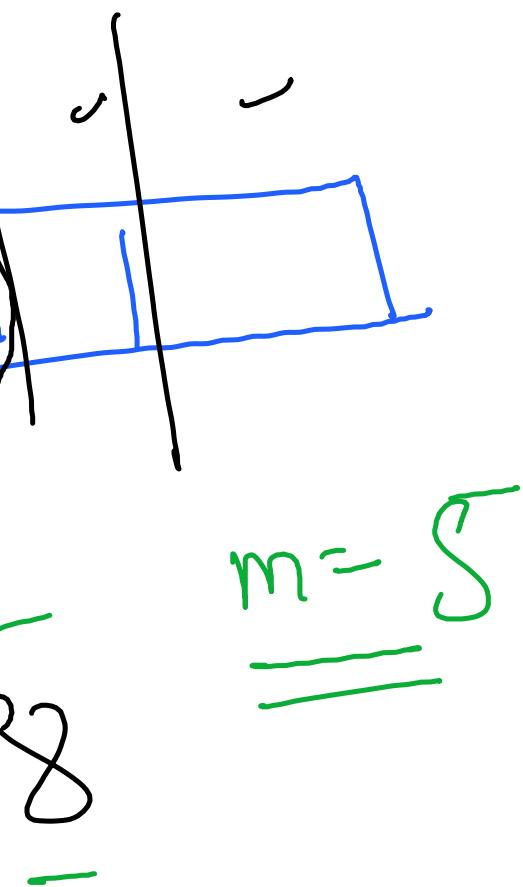
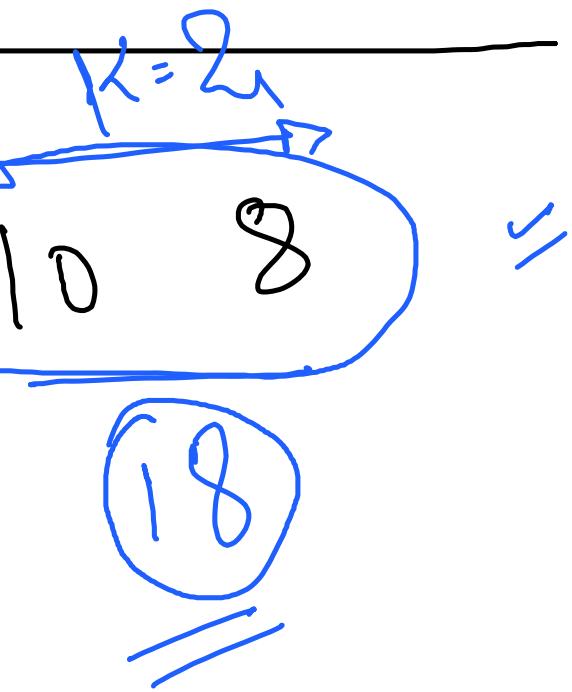
$K=2$
≡

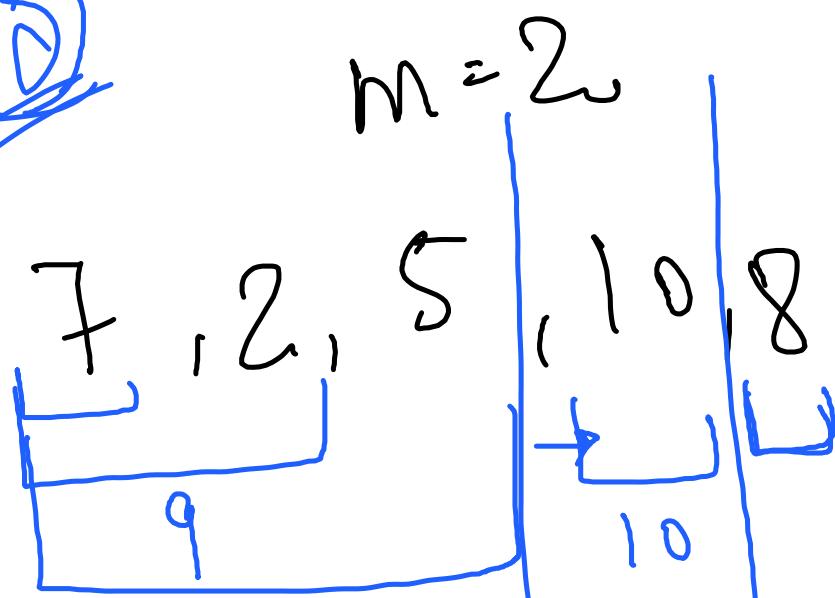
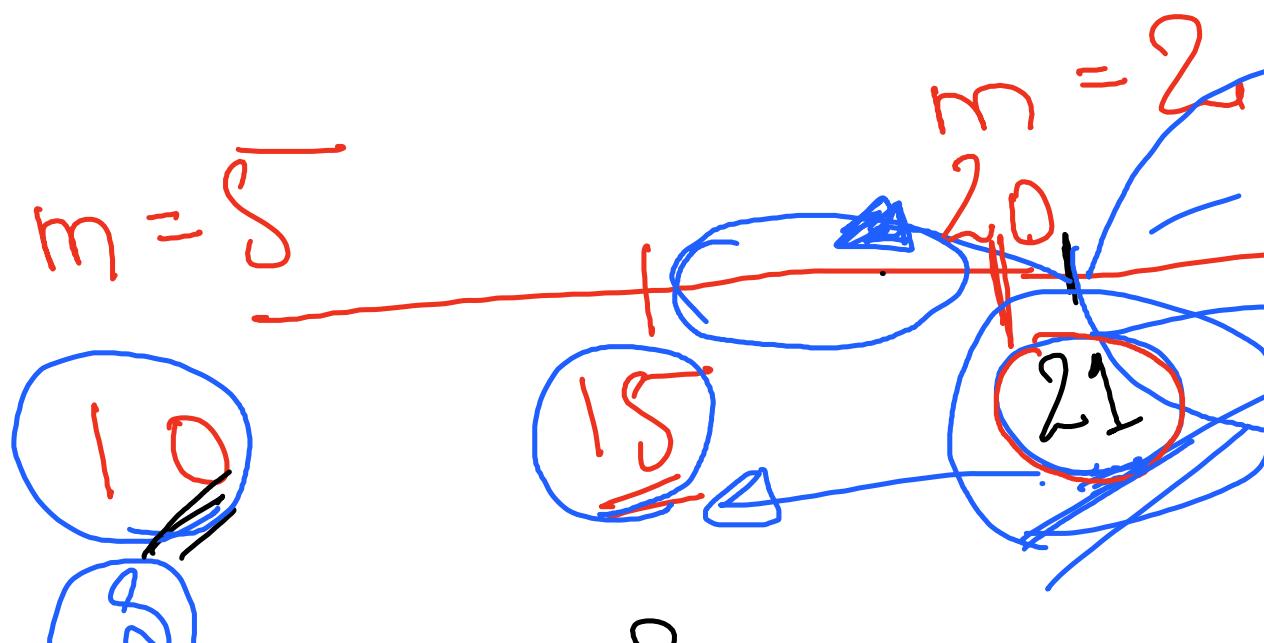
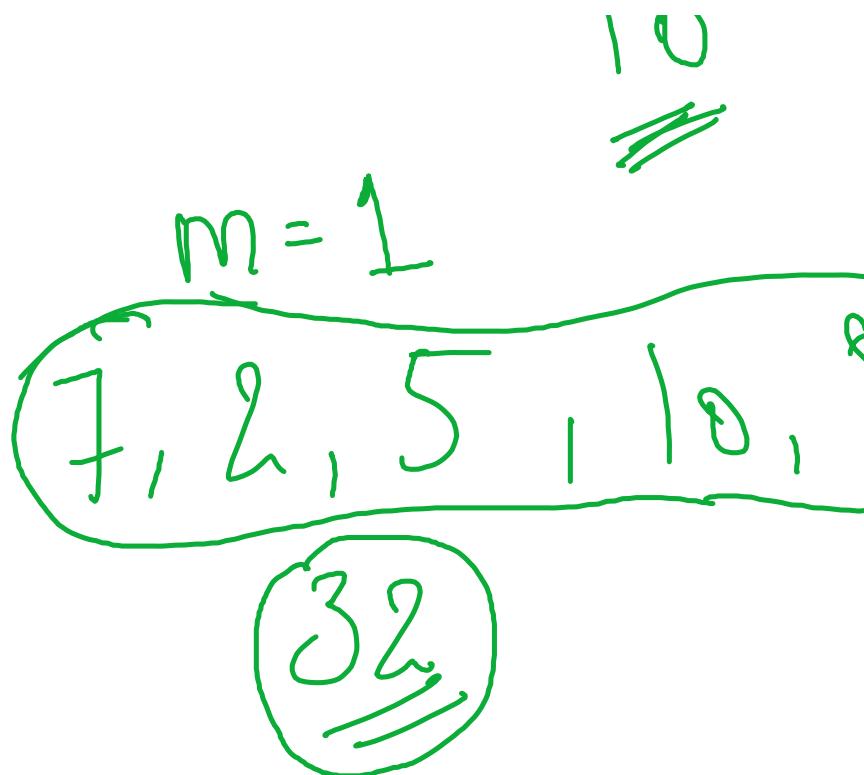
$R=1$
7 2 5

14

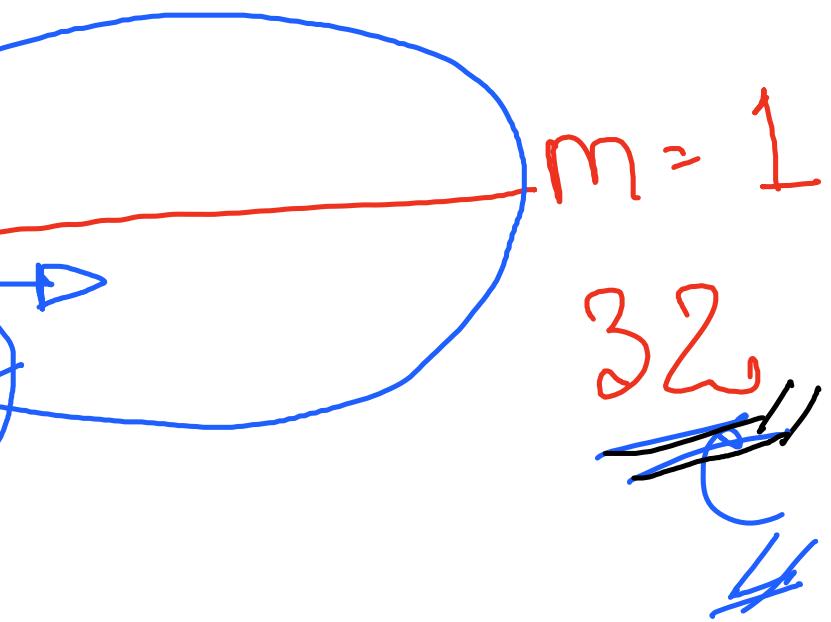


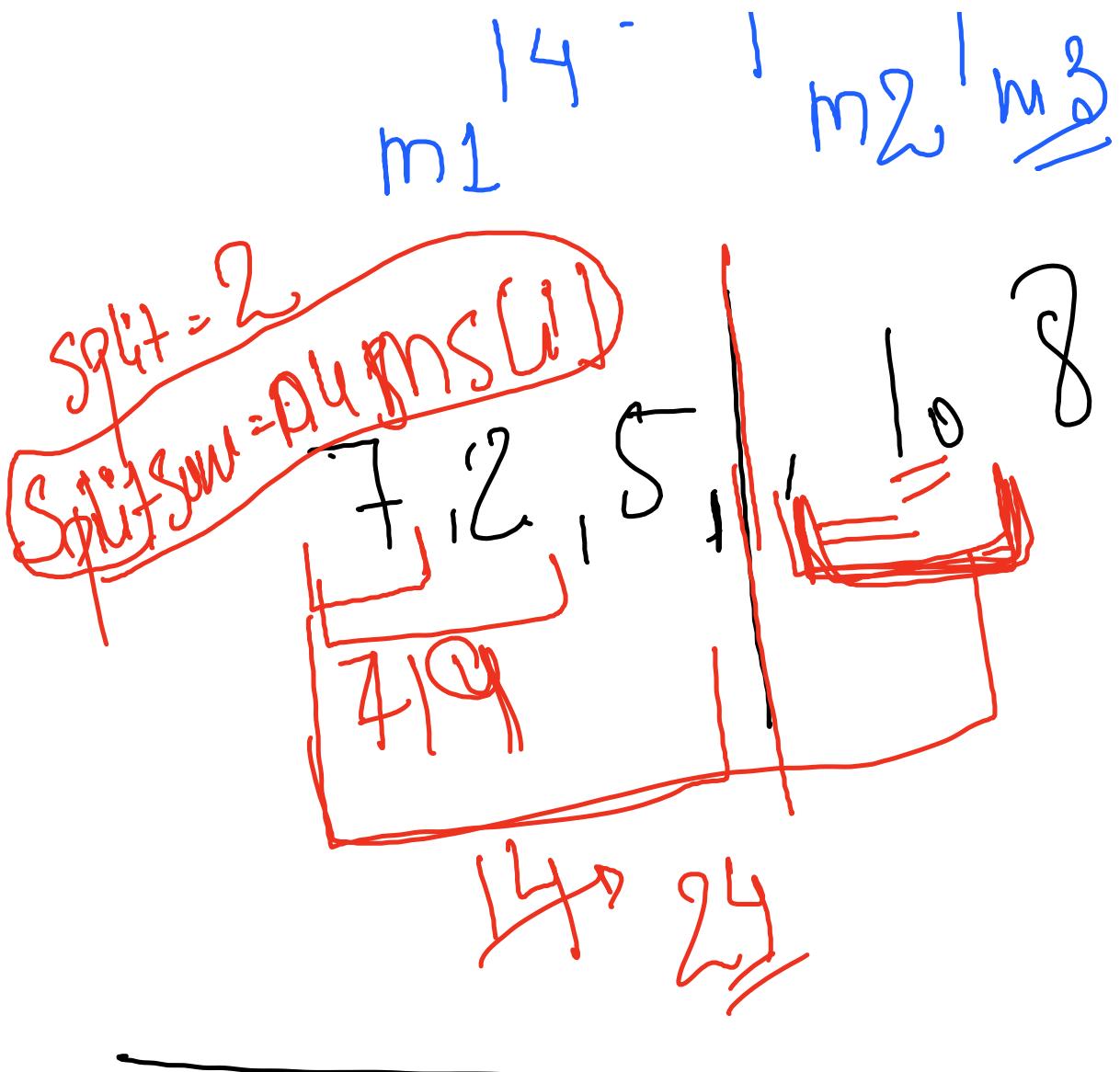
7 | 2 | 5 | 1 0 |



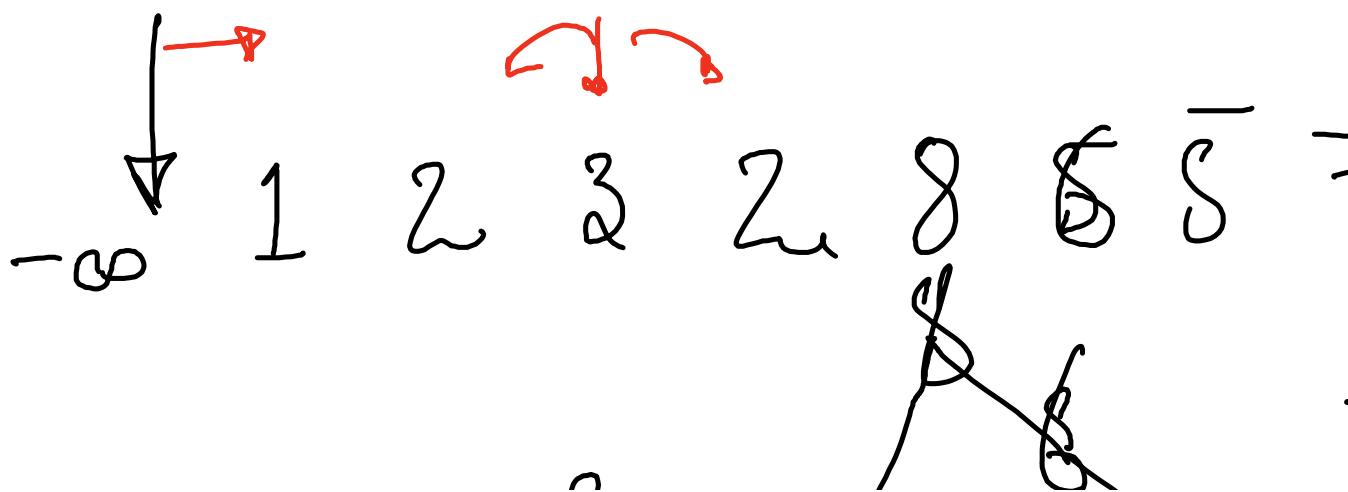


8





Peak F



2)

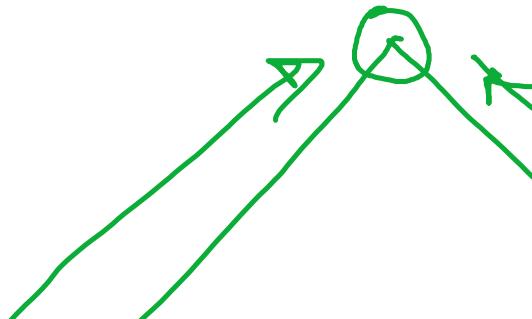
Element

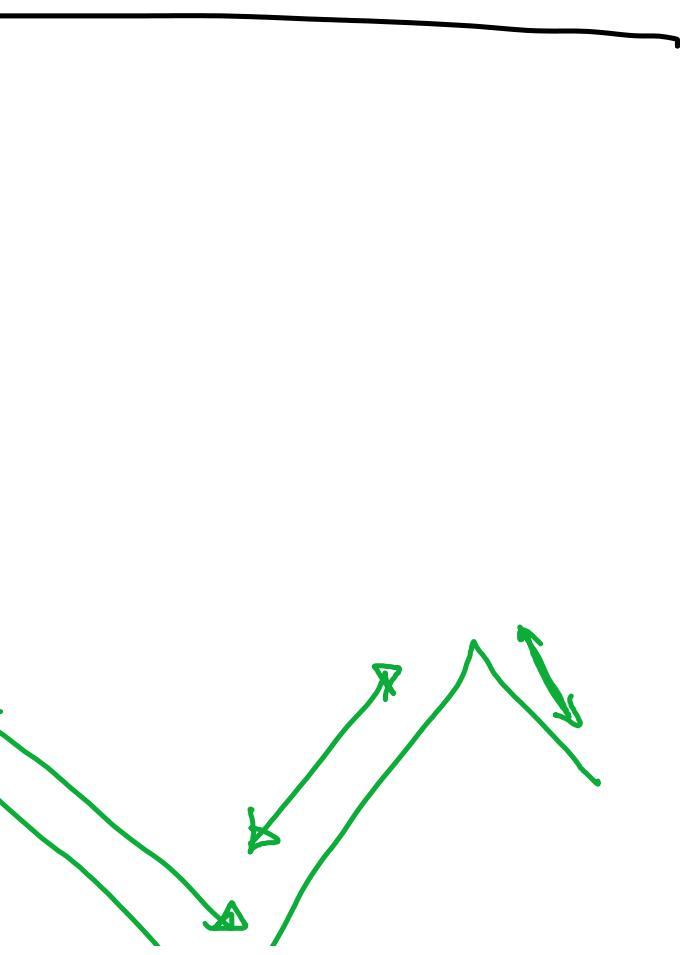
$\Theta(n)$

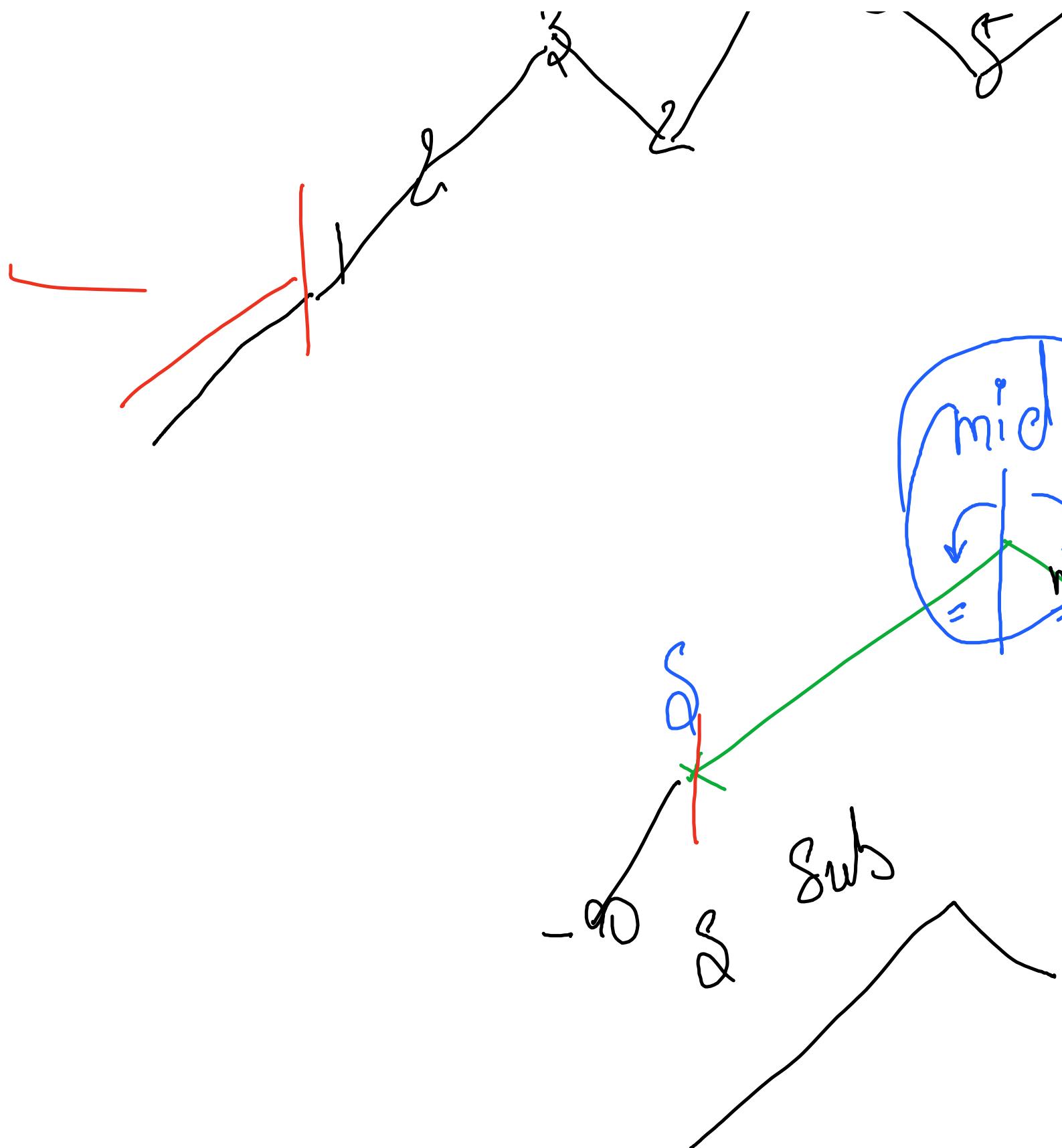
+

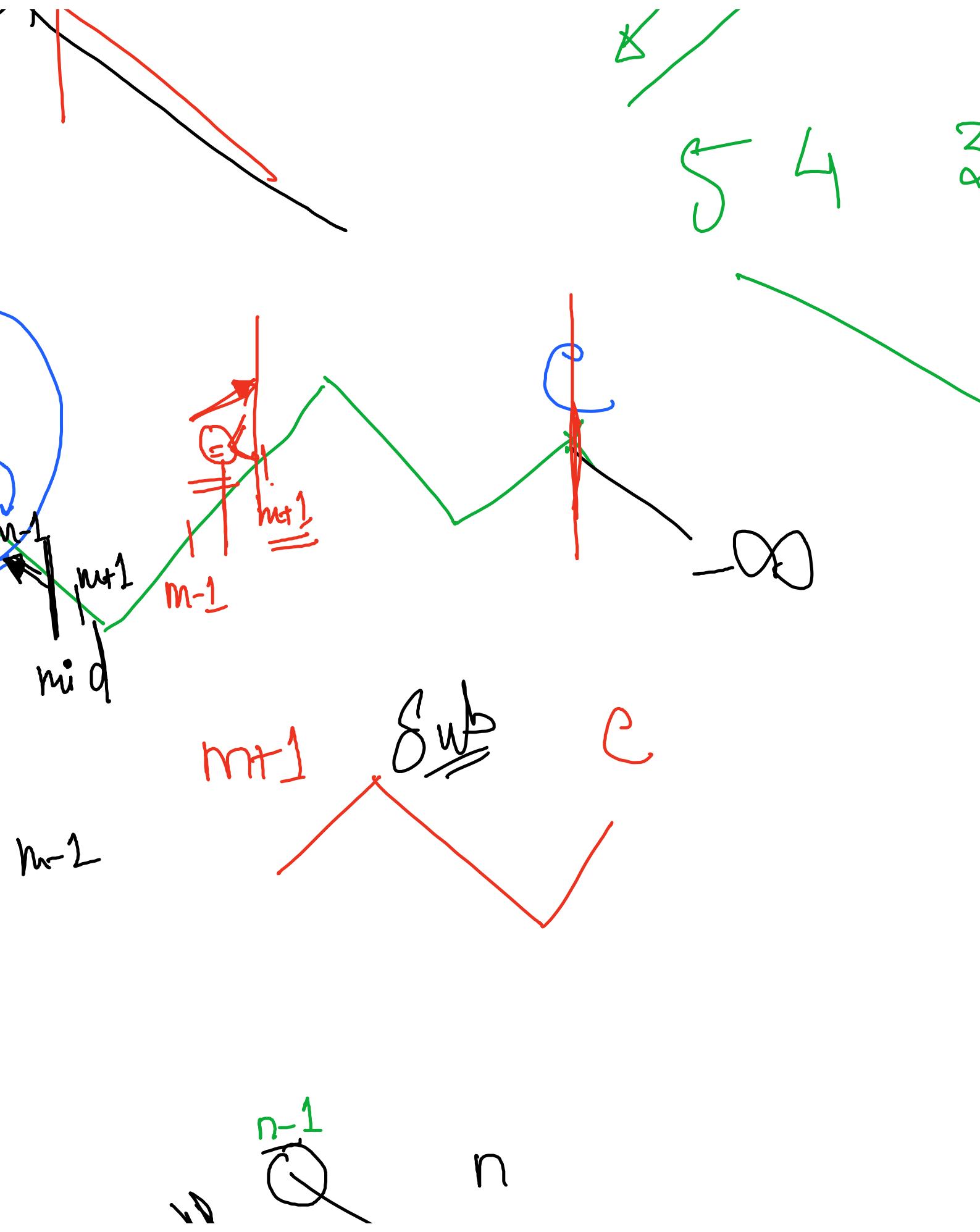
$-\infty$

\exists





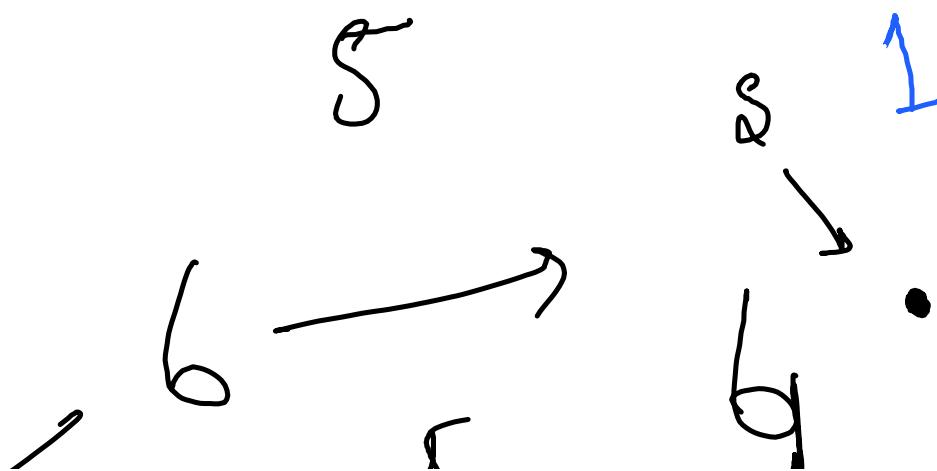


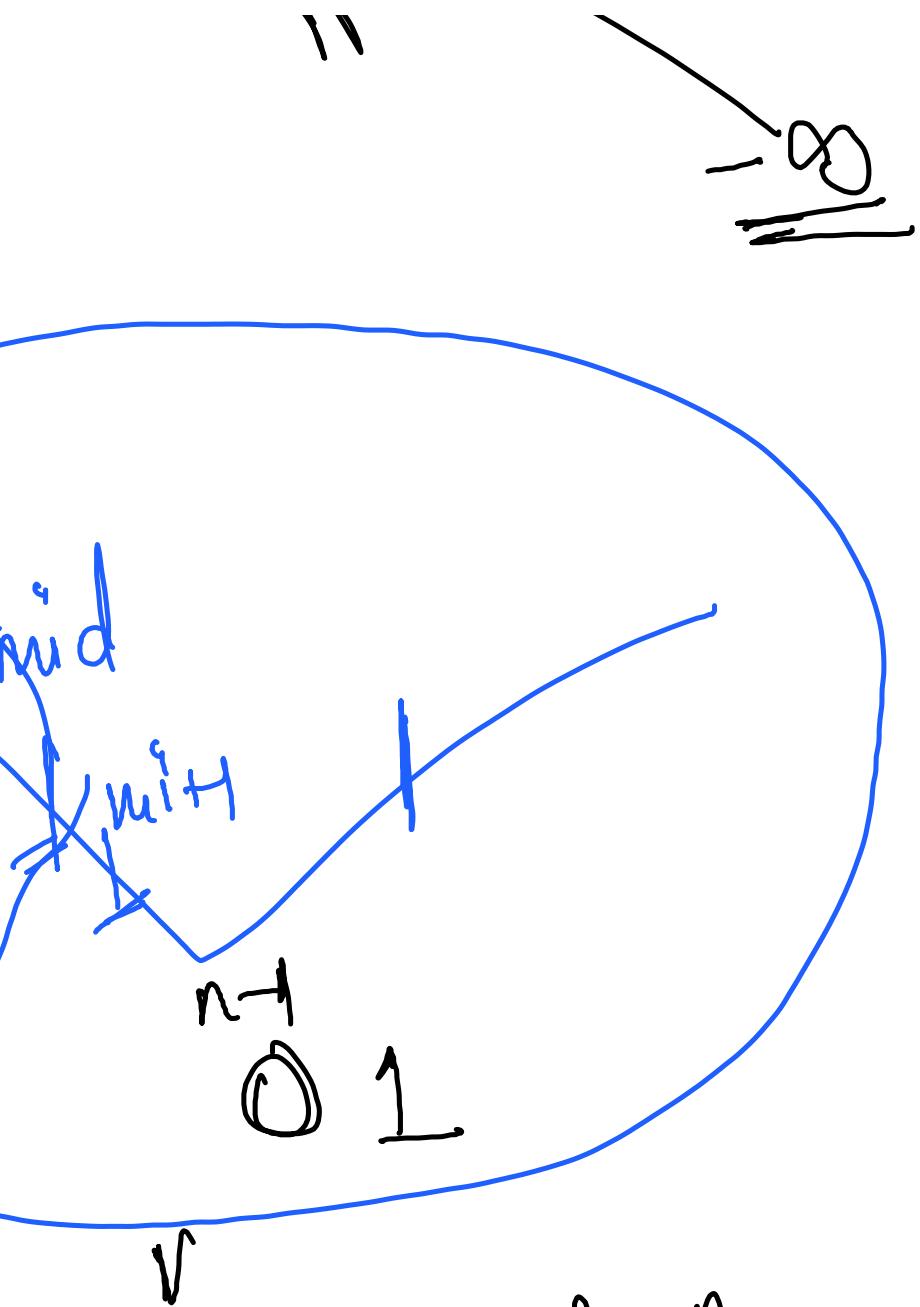


✓

3

✓

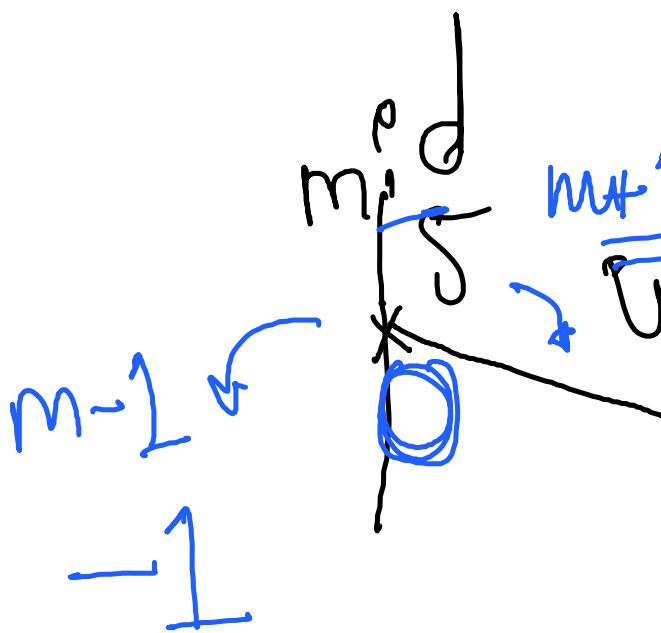
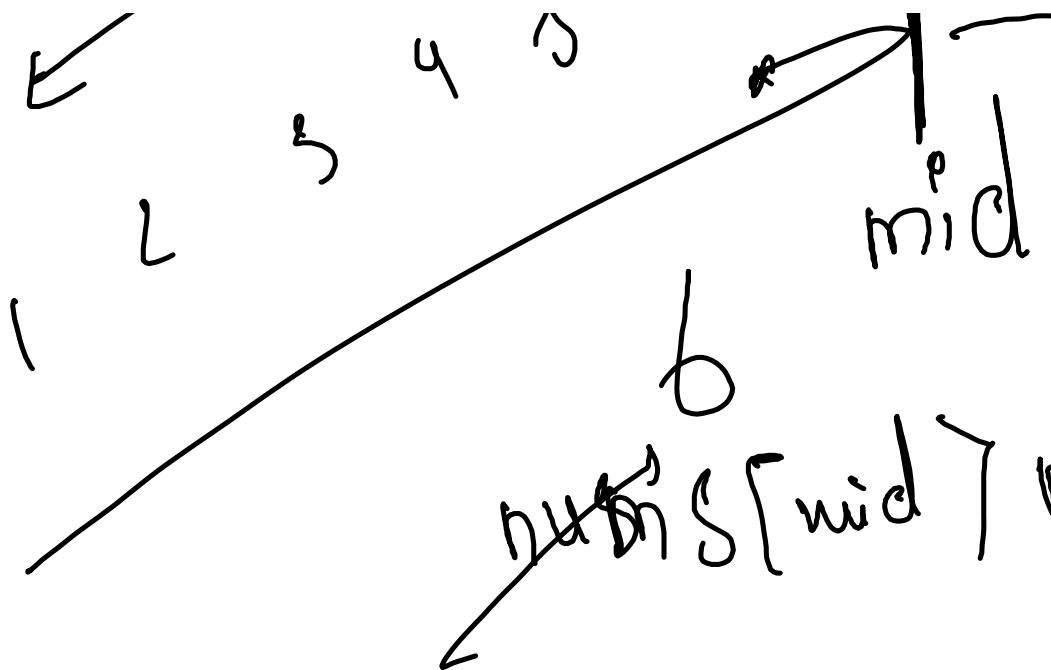




$$\frac{\theta + \phi}{2} = \alpha$$

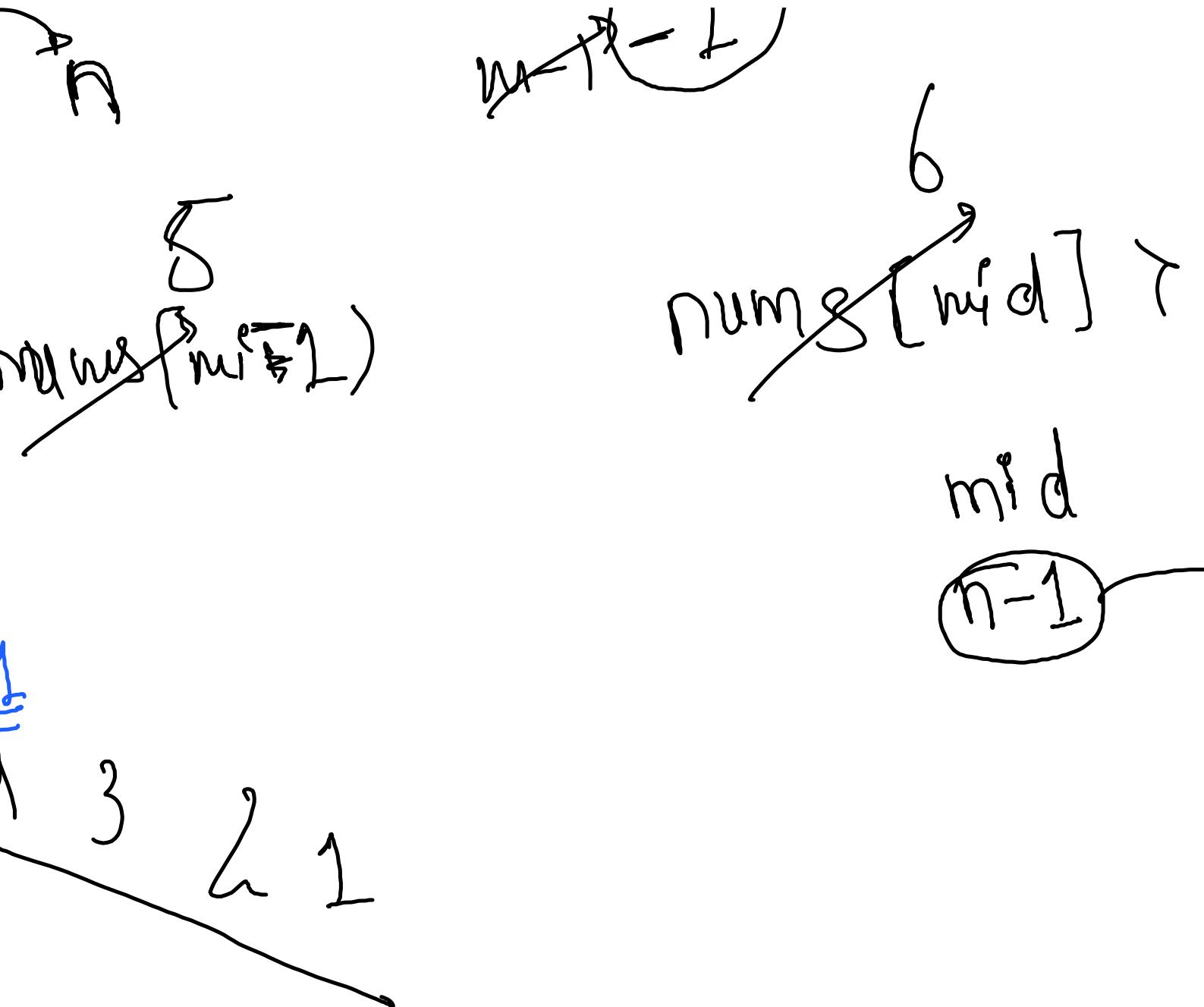
m > net

x

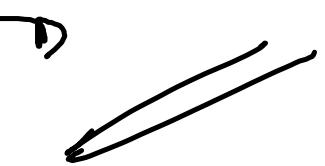
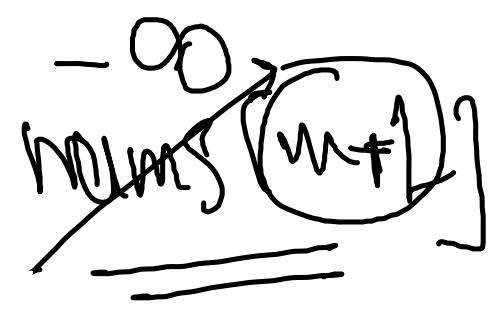


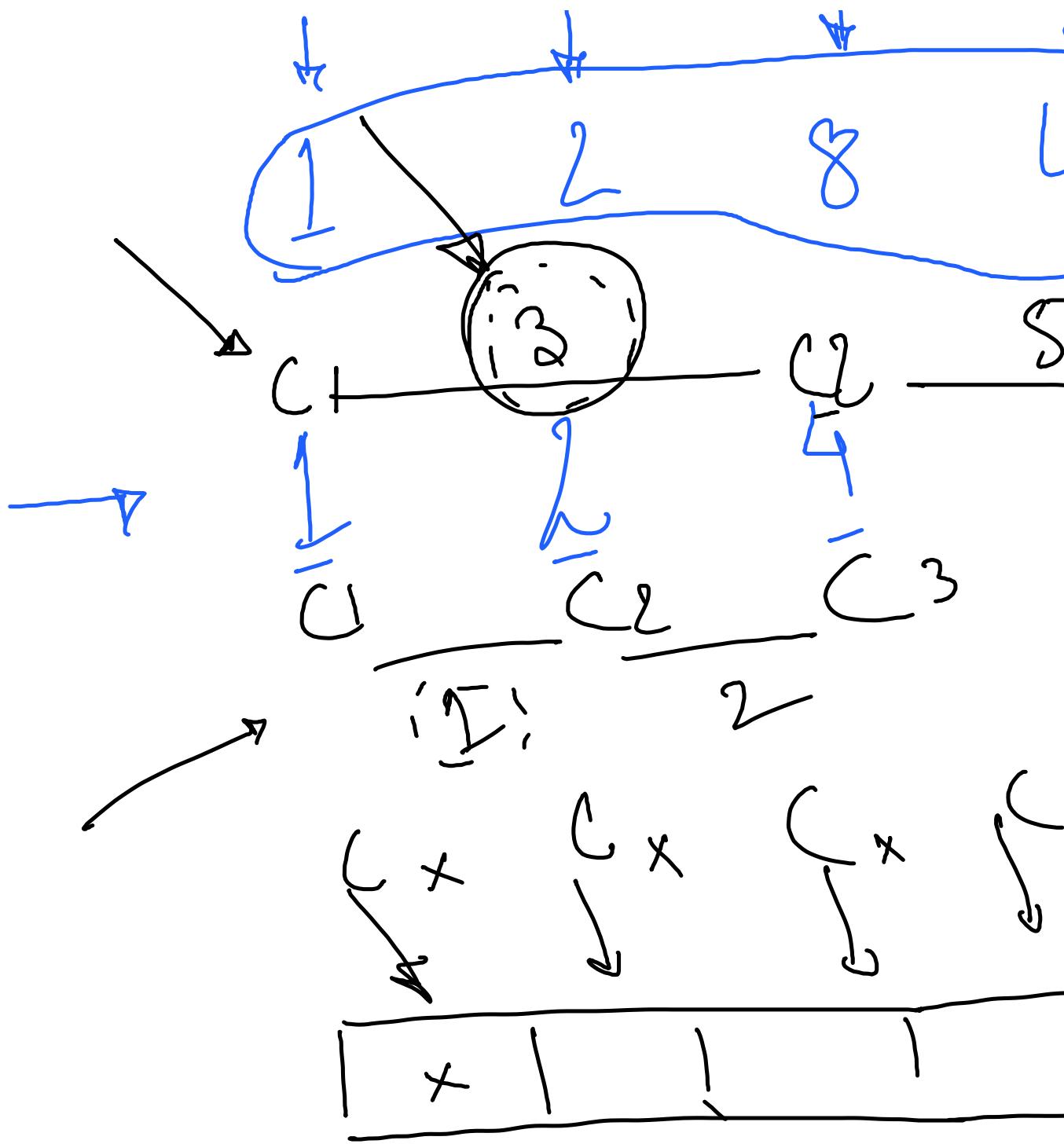
$$mid = 0$$

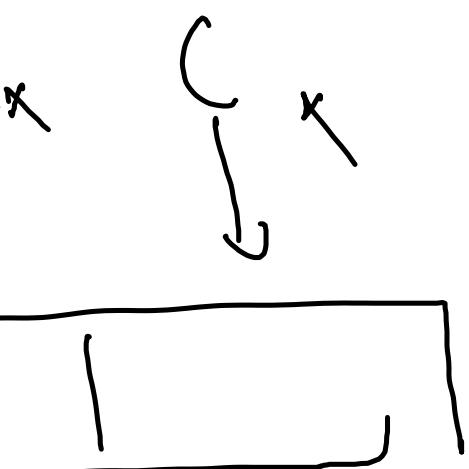
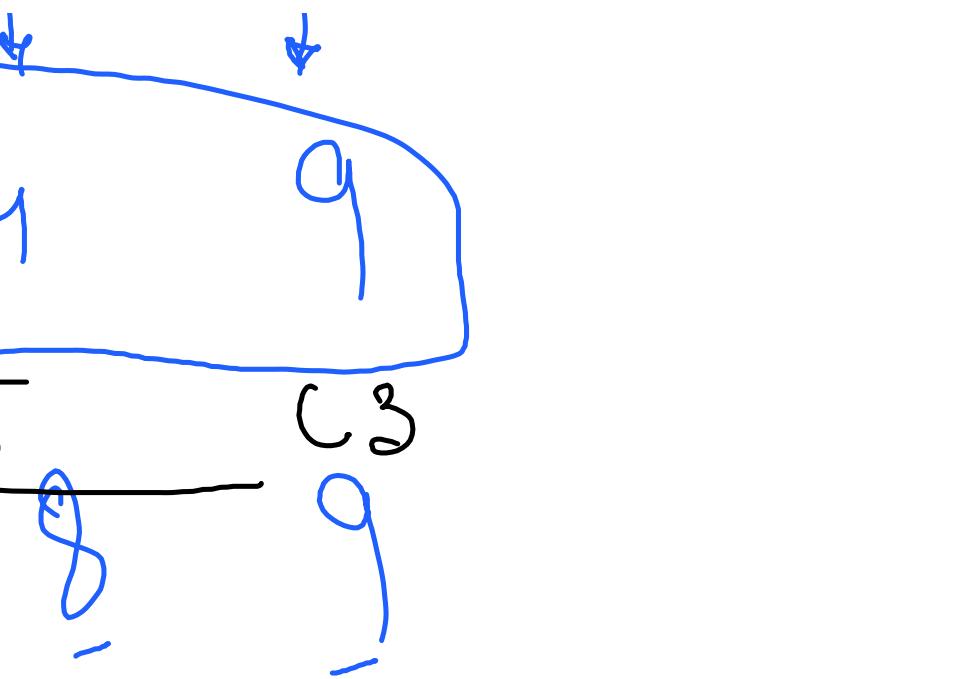
$$-1 \rightarrow -$$



at





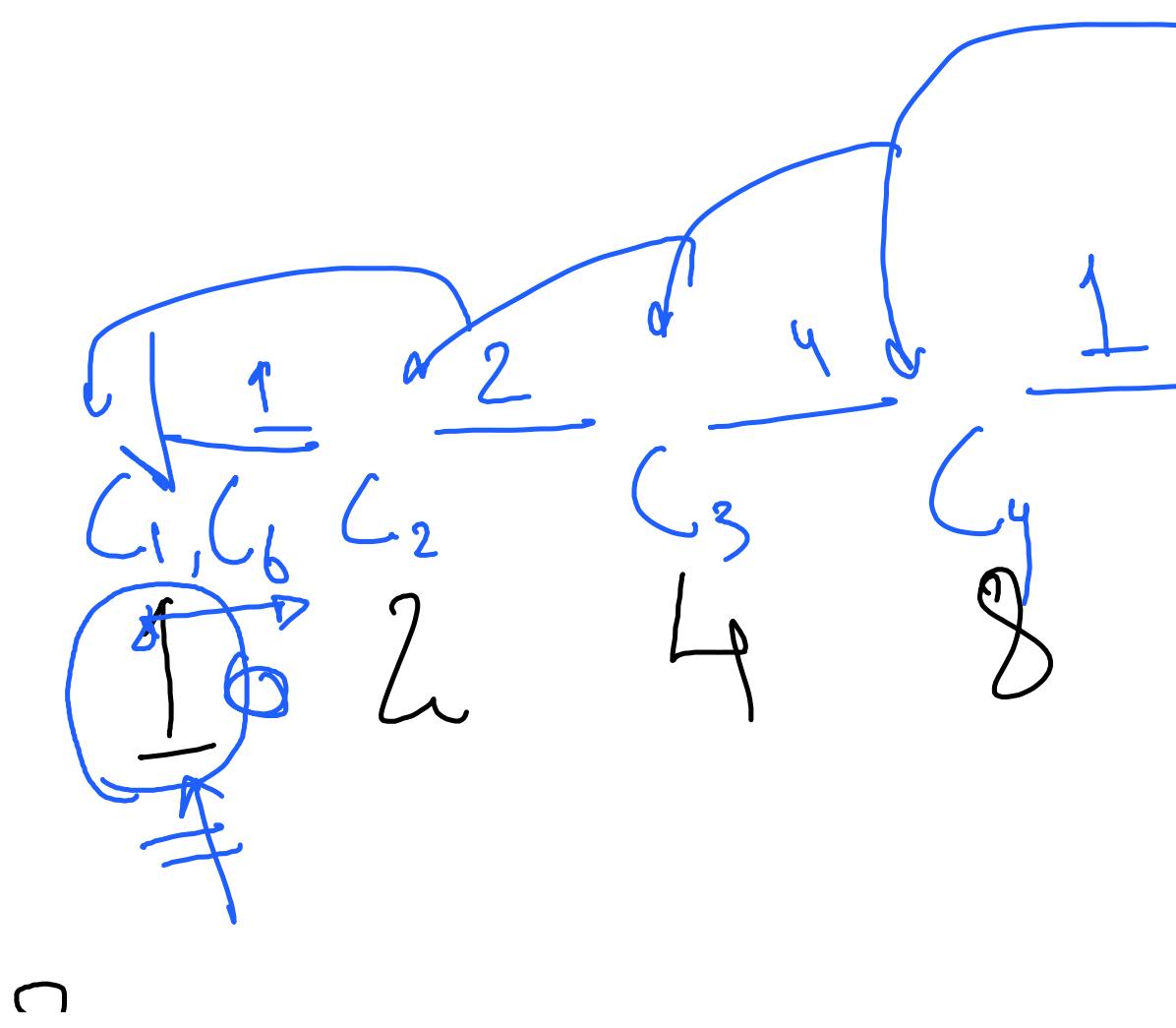


$$\frac{n}{n^2} \sim 10^{-5}$$

1 sec \rightarrow
A hand-drawn diagram showing a horizontal line with a small circular region attached to it. Inside the circle is a cross symbol, representing a volume element or a point in space over time.

$$f \sim 1/n^2$$

108

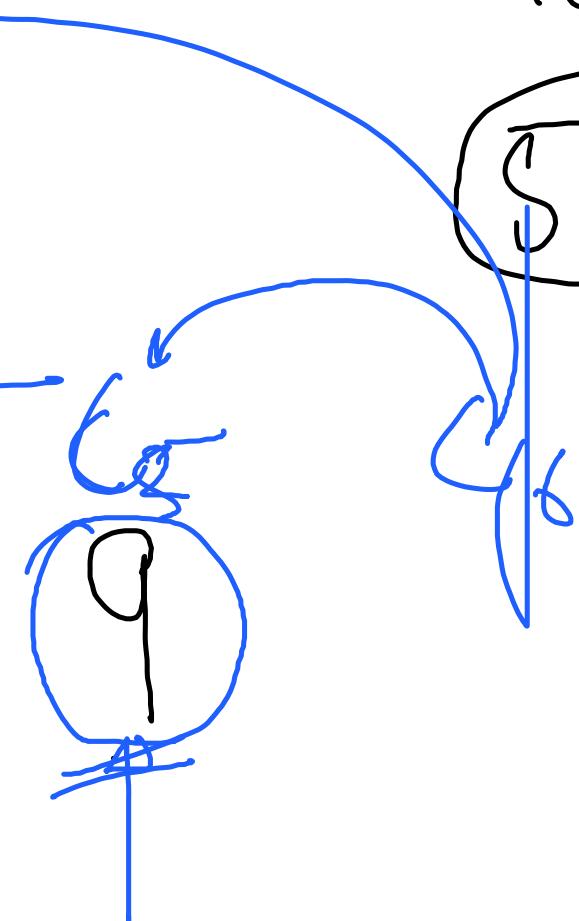


$10^{10} \rightarrow 10^8$ \times

$n \log_2 n$

$10^5 \times 10^5 = 10^{10}$

$5 \times 10^5 \times \log_2 10^3 = 5 \times 10^5 \times 10^3$



- σ / τ

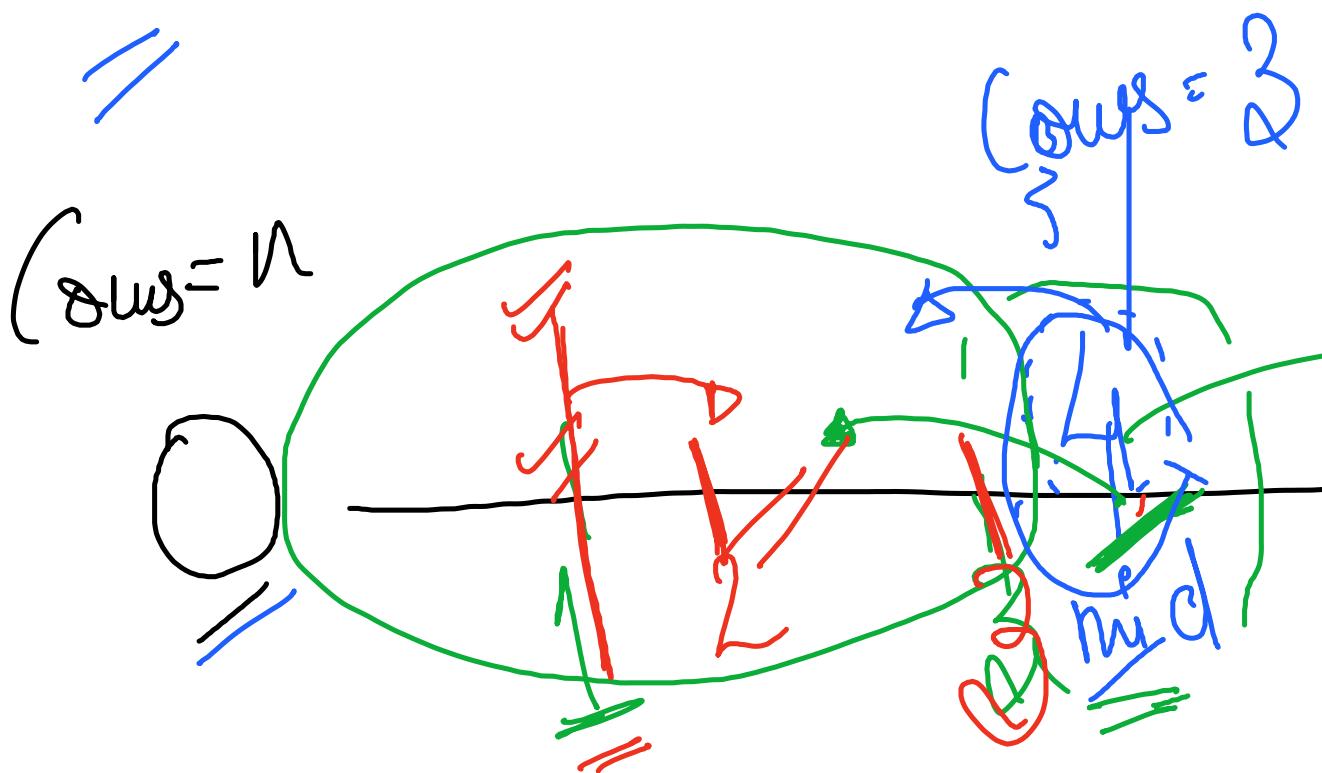
3

10°

$C \rightarrow$

8

\equiv



$C_1 \xrightarrow{1} C_2 \xrightarrow{2} C_3$

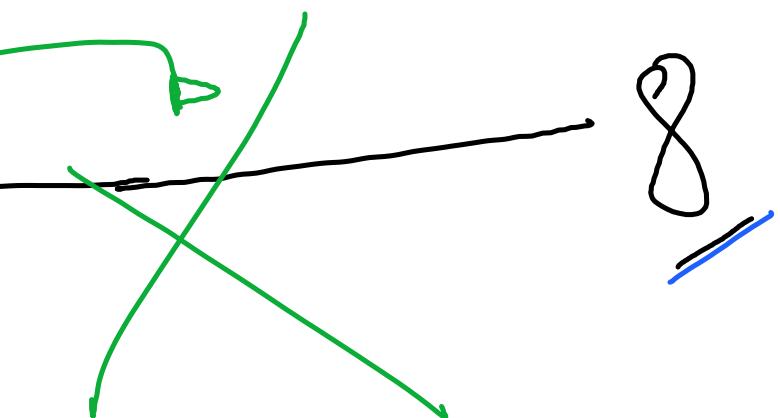
8

mid

$C = J/6$

1/0

Cong 1/2

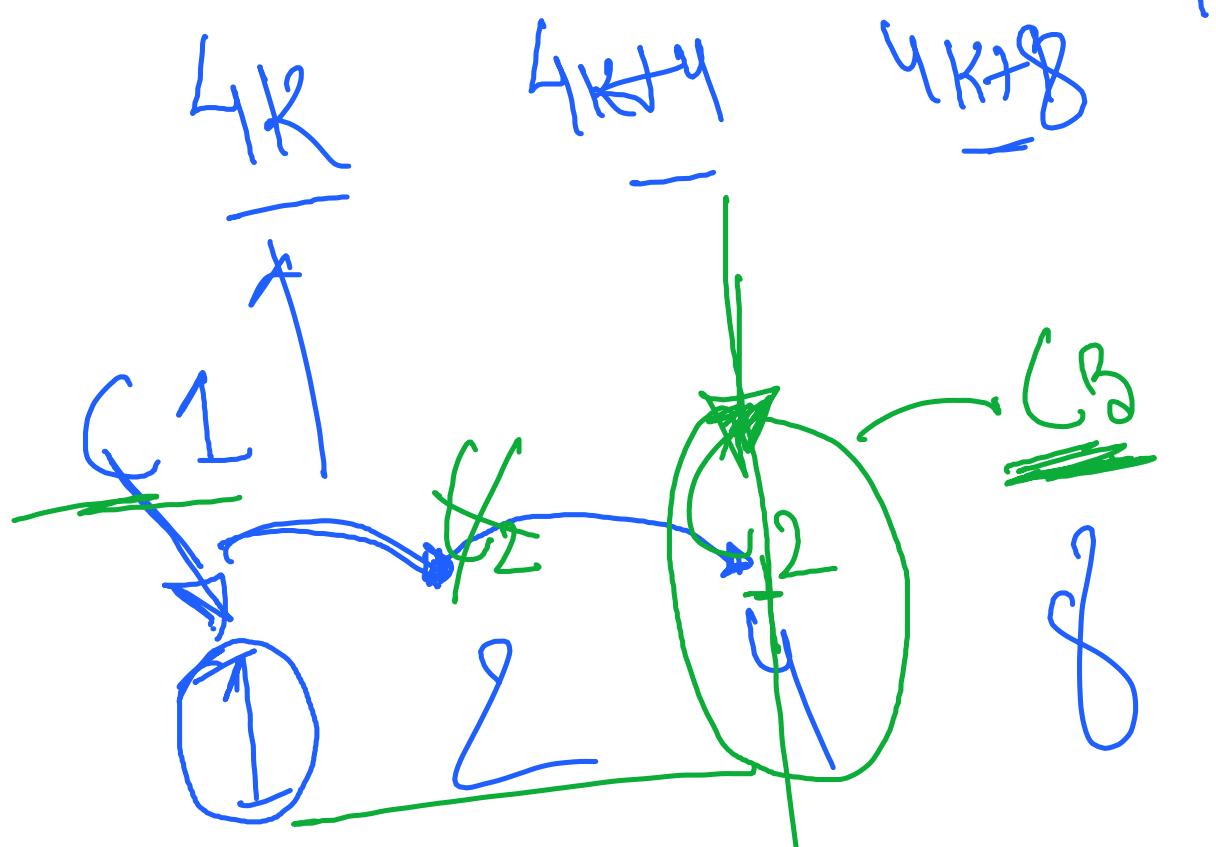
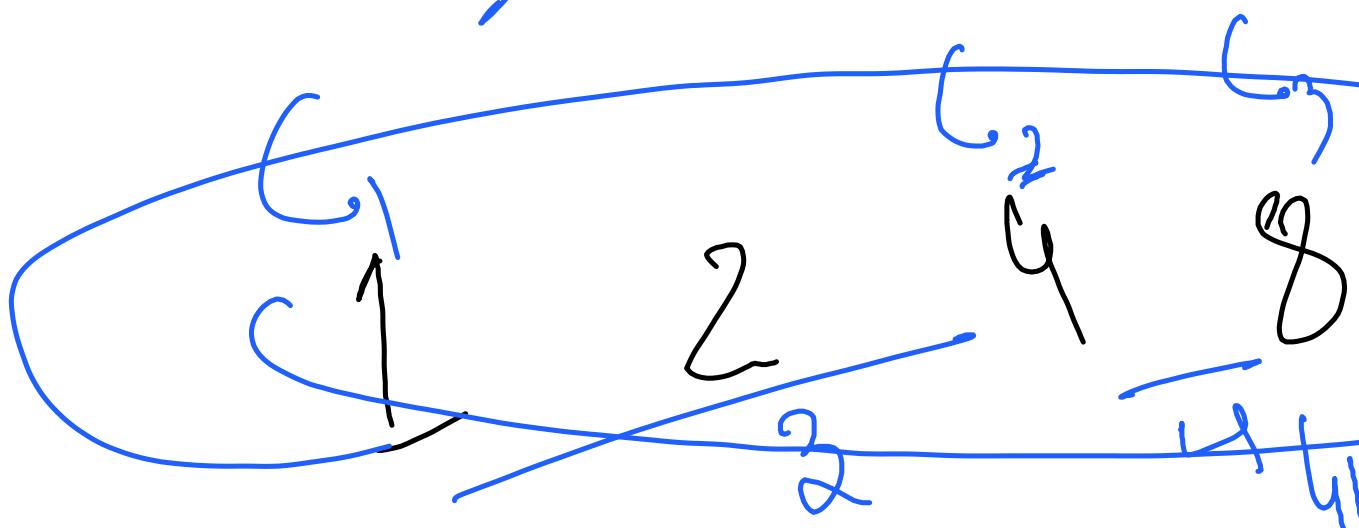
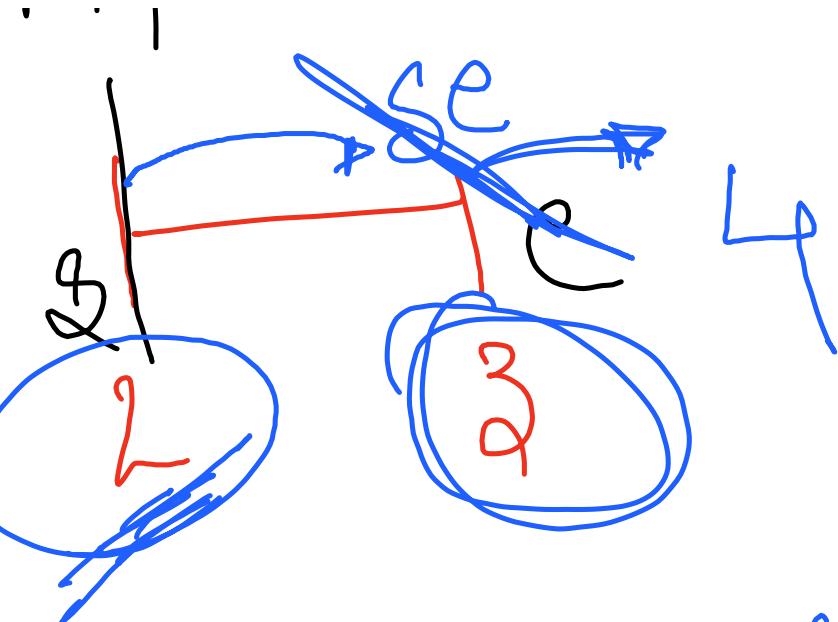


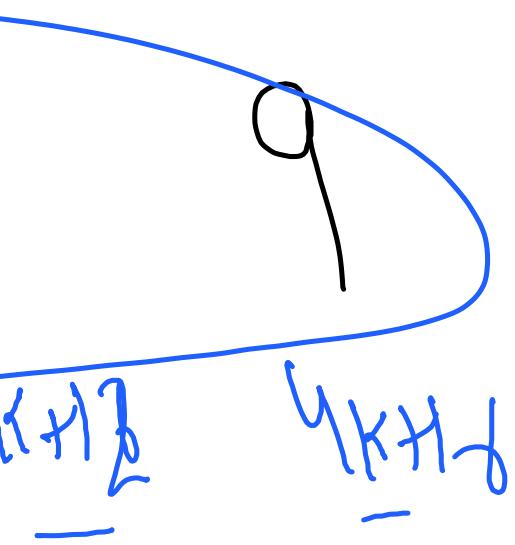
g

$C_1 - \frac{S}{b} - C_2 - C_3$

s p

44



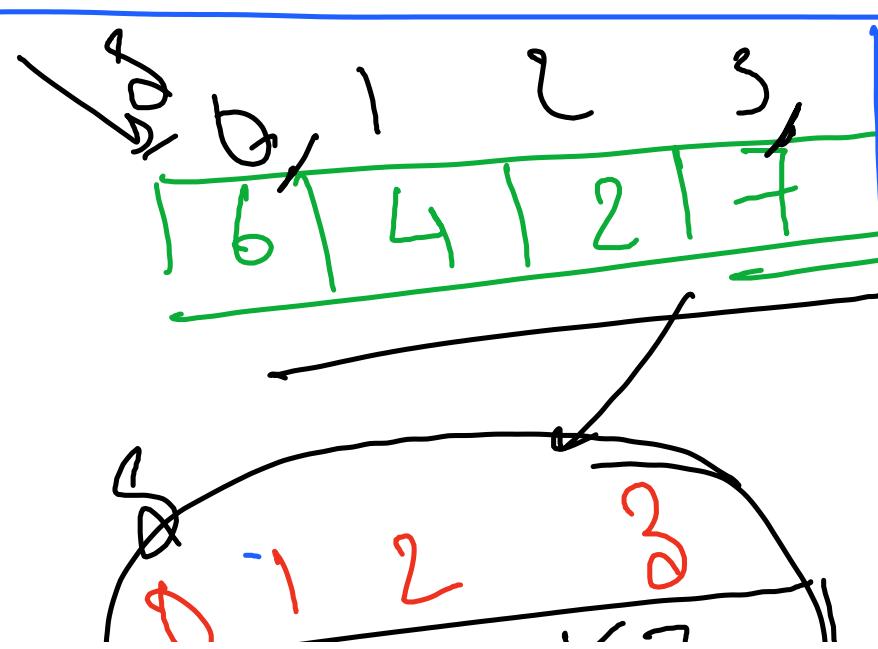
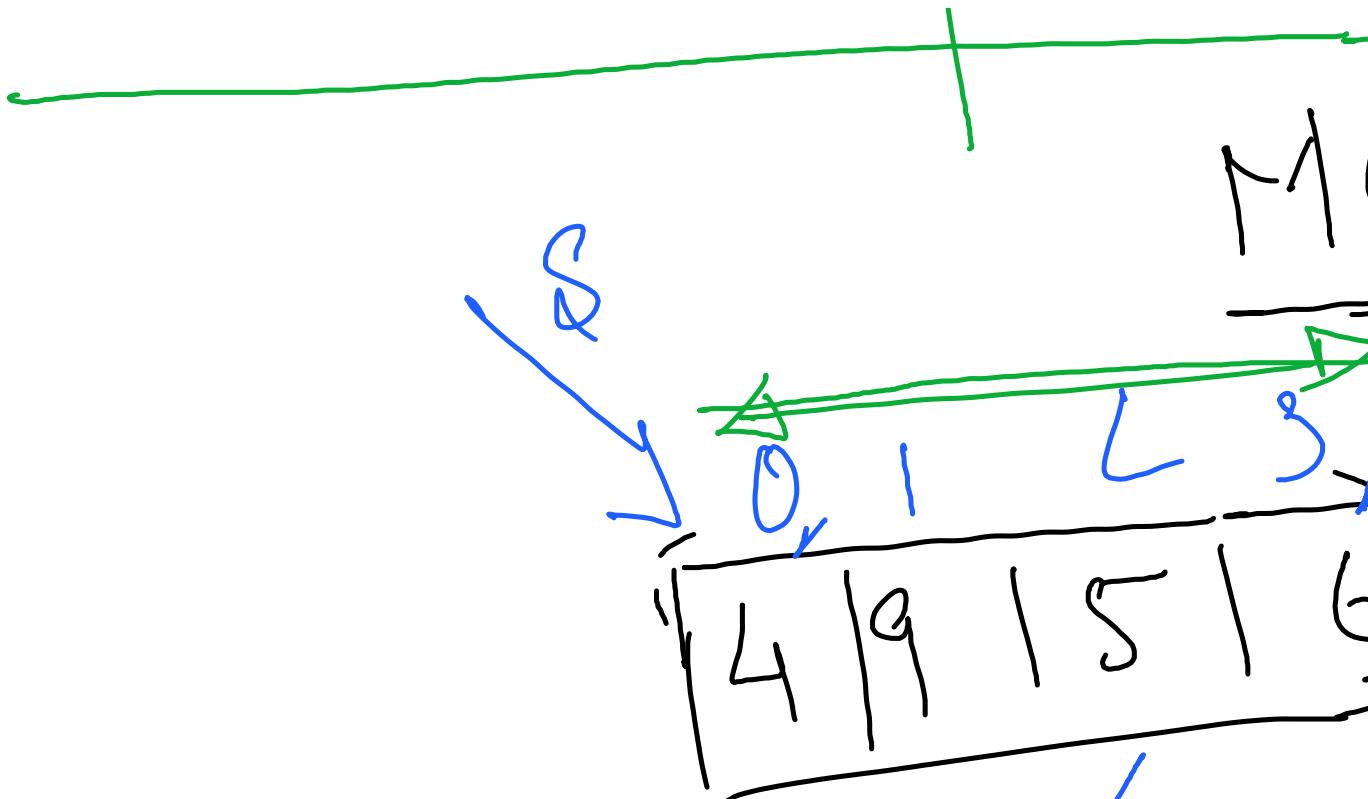


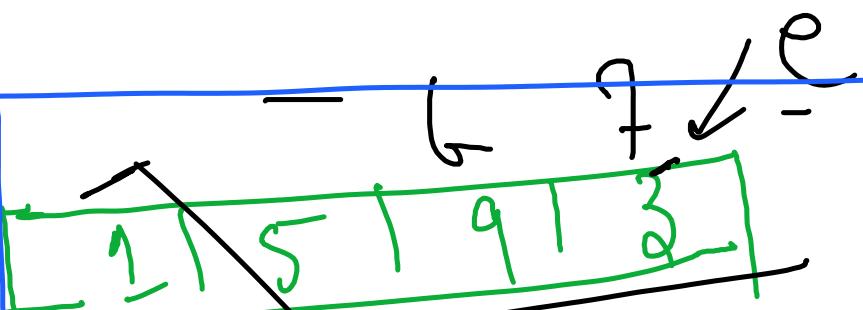
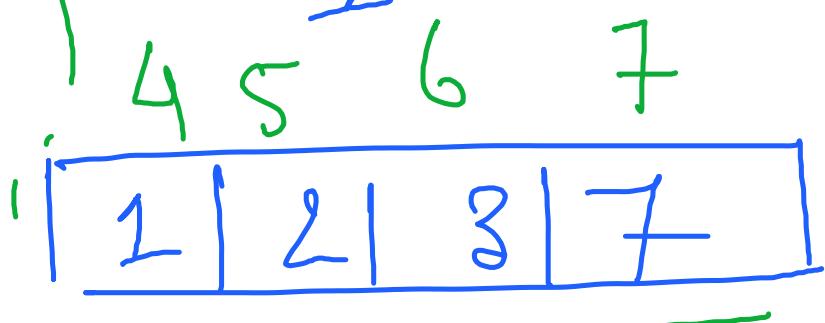
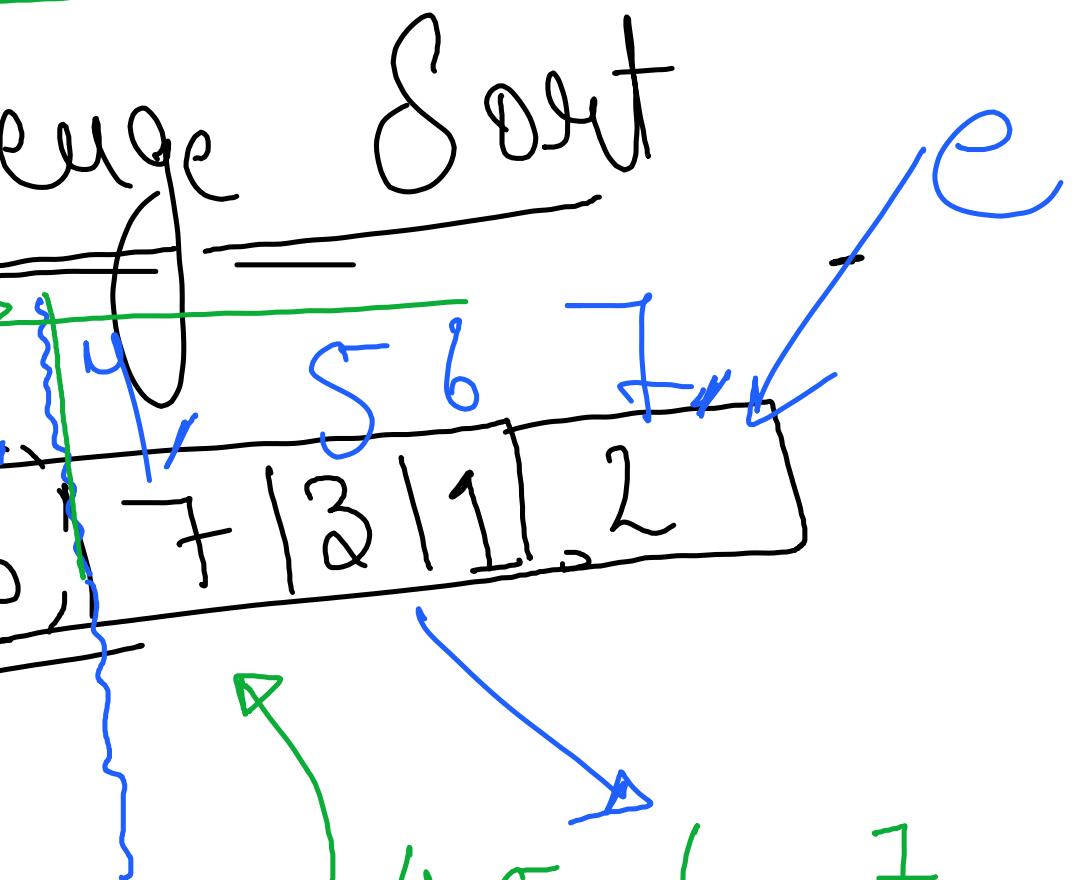
y_{k+2}

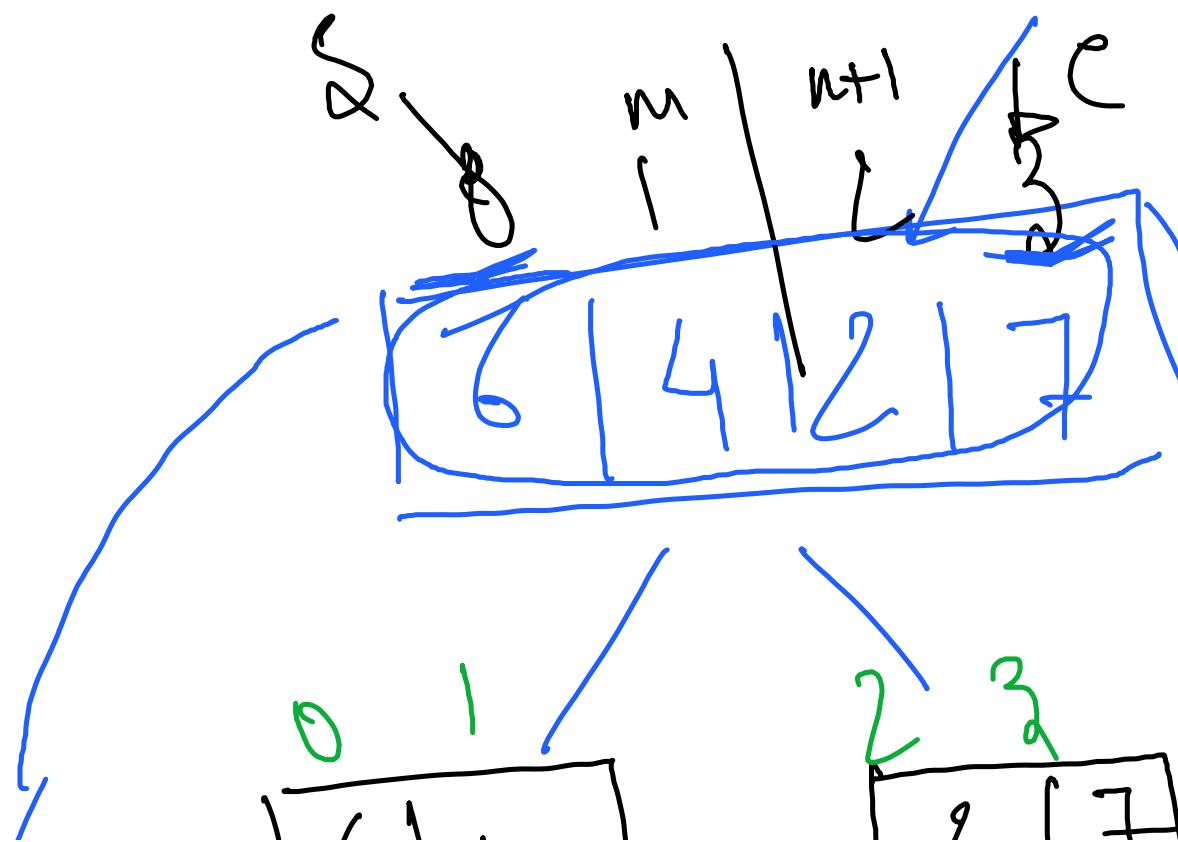
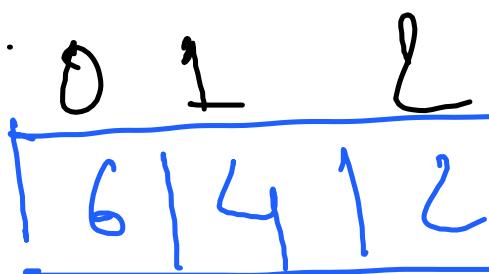
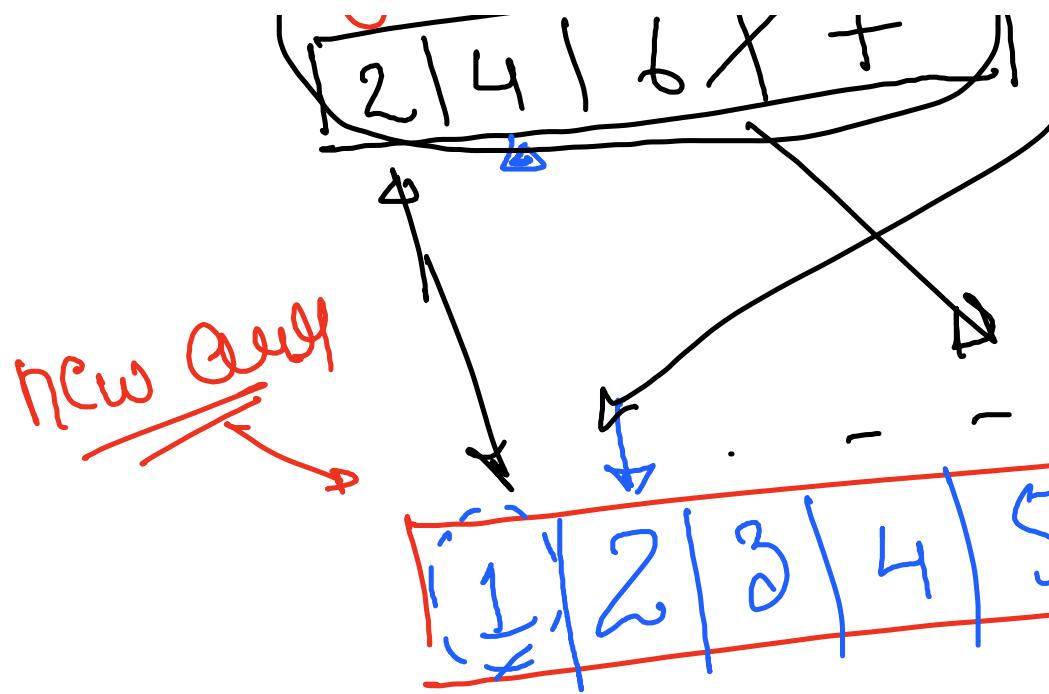
3
2

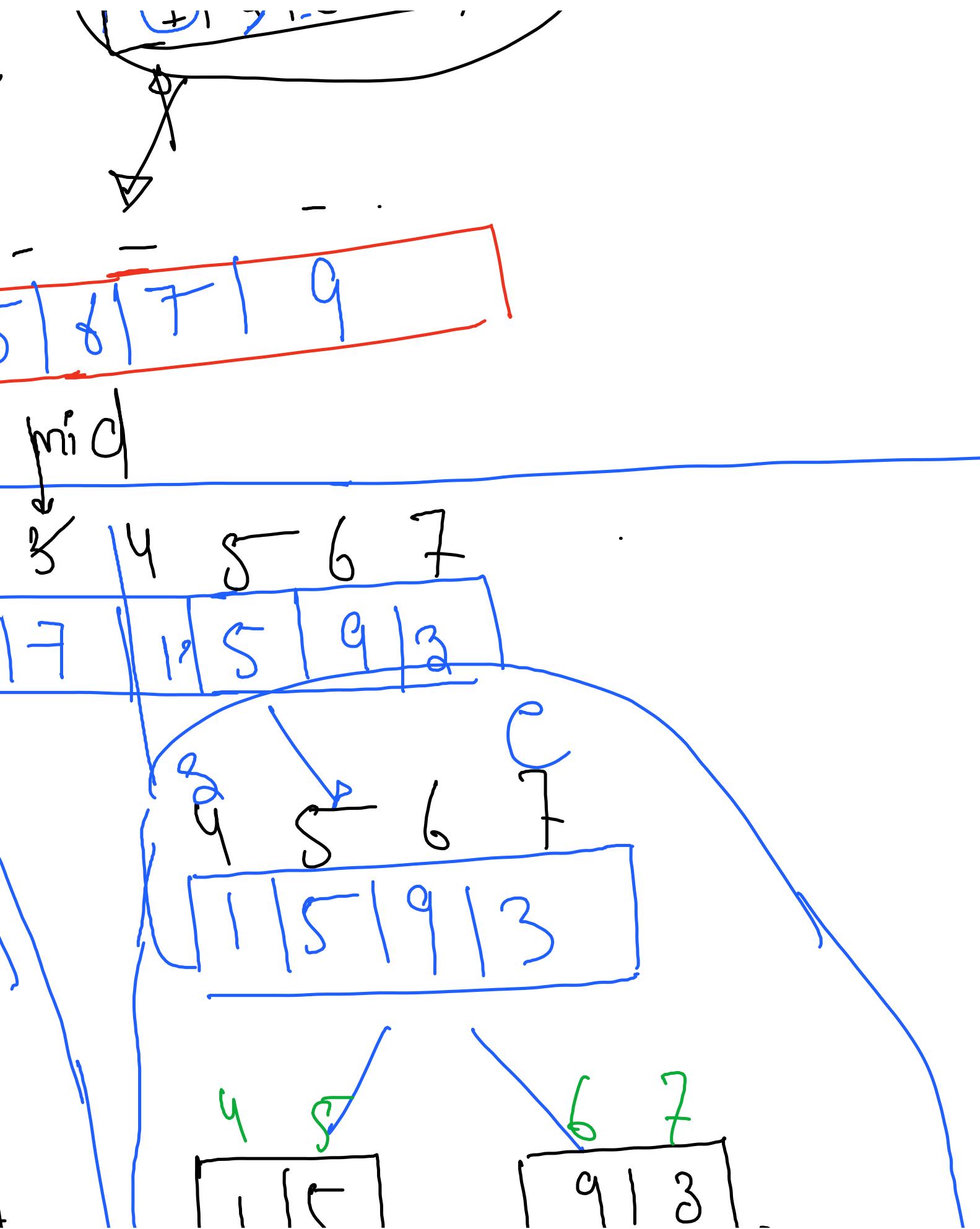
q

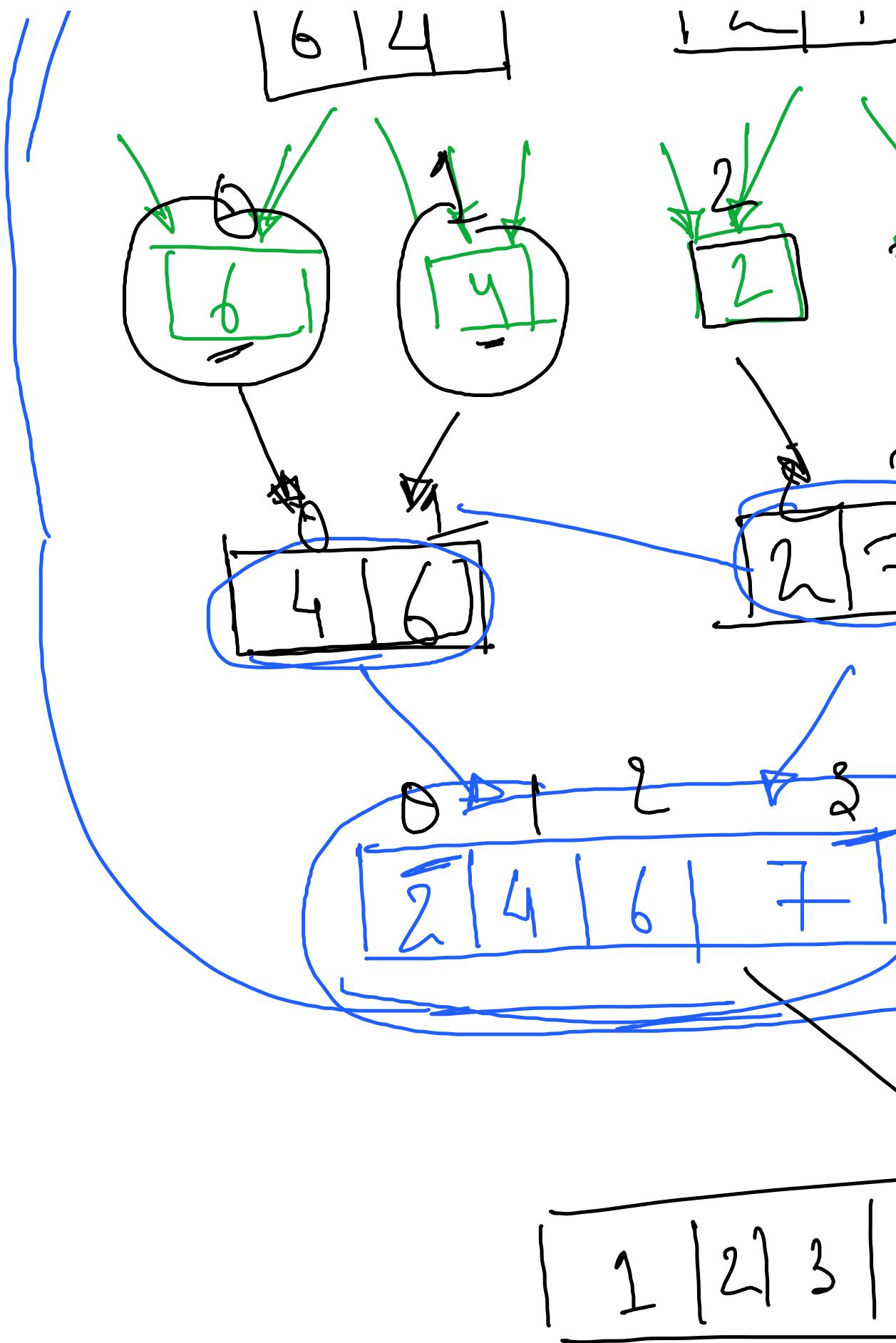


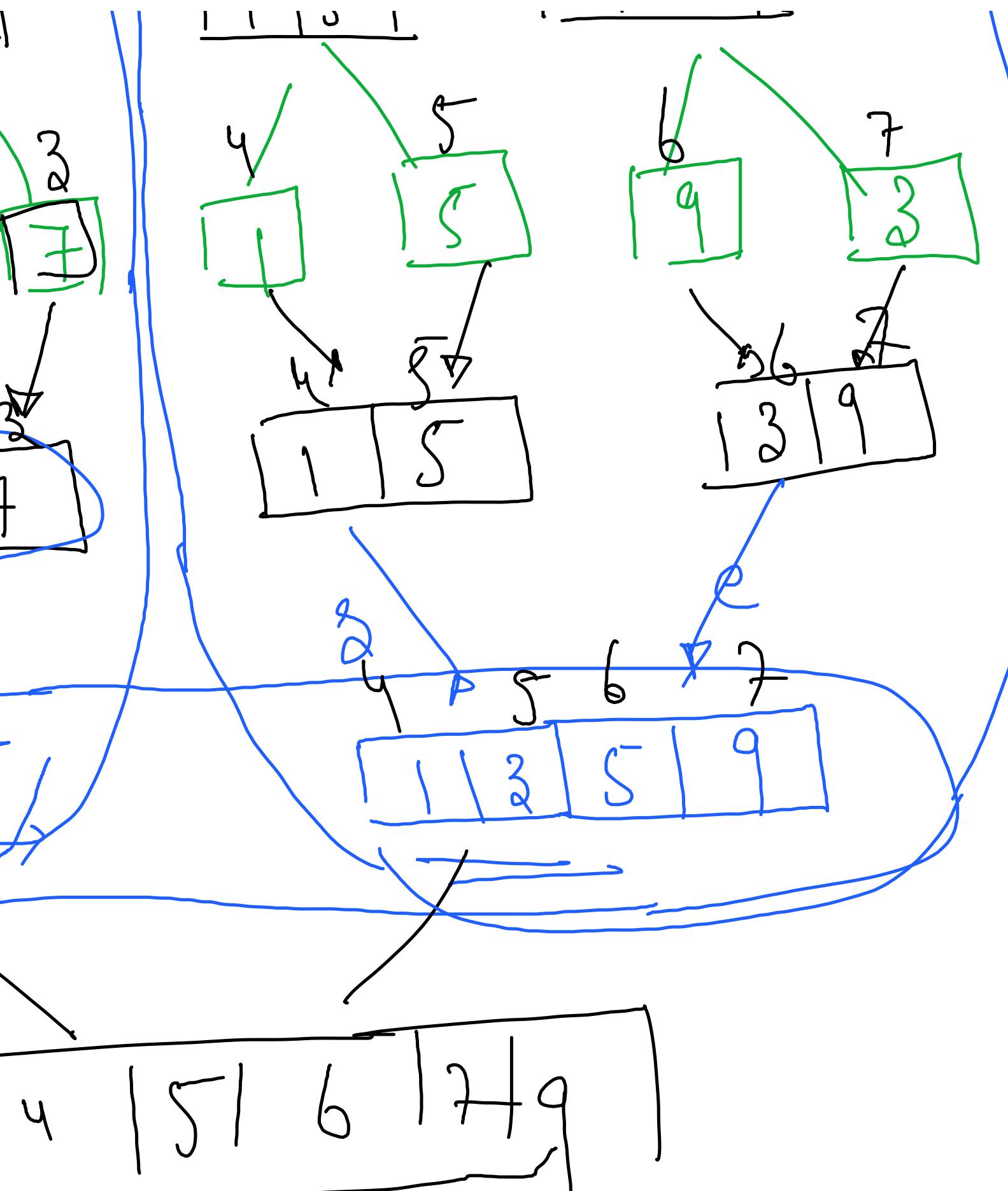




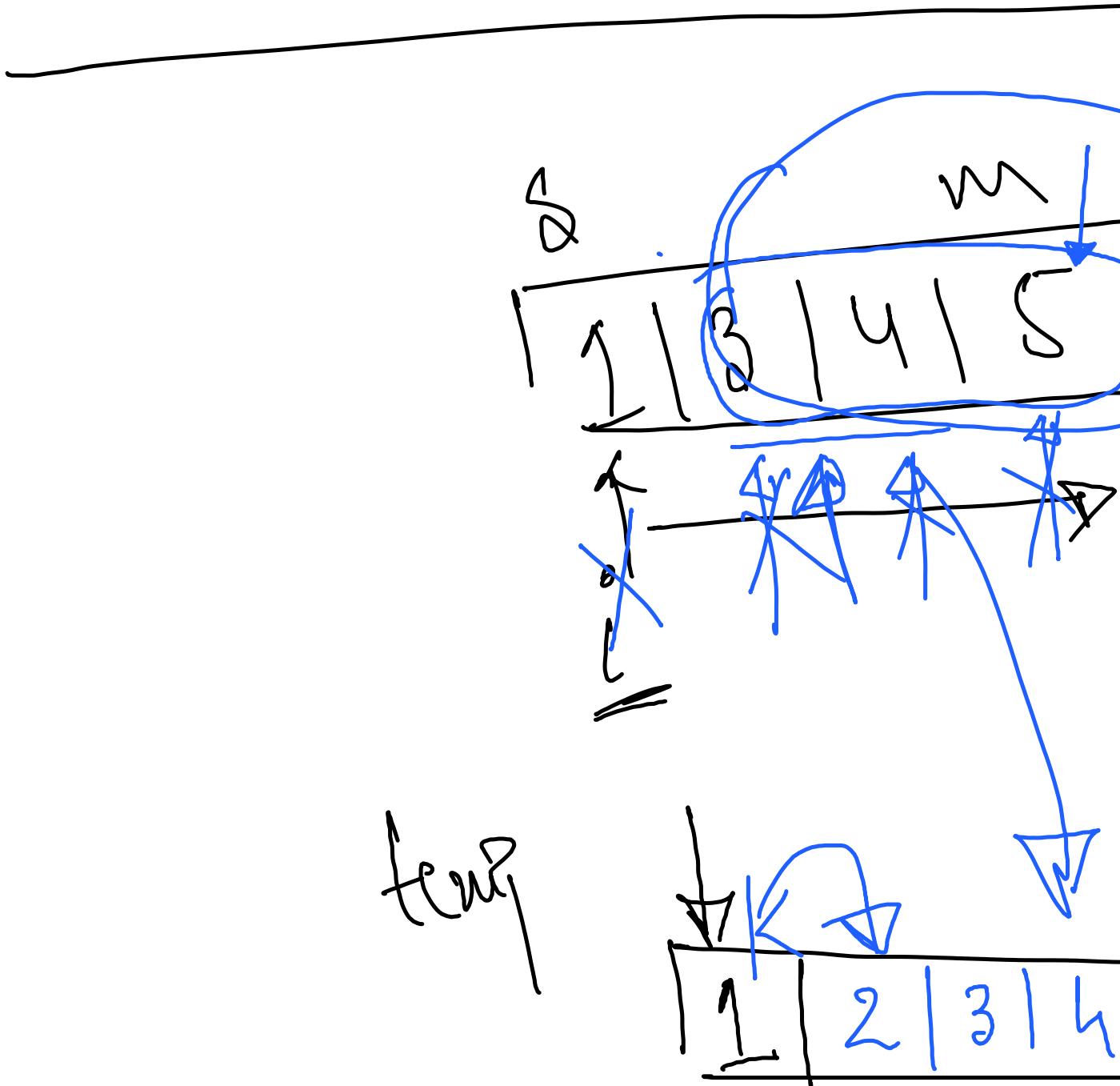






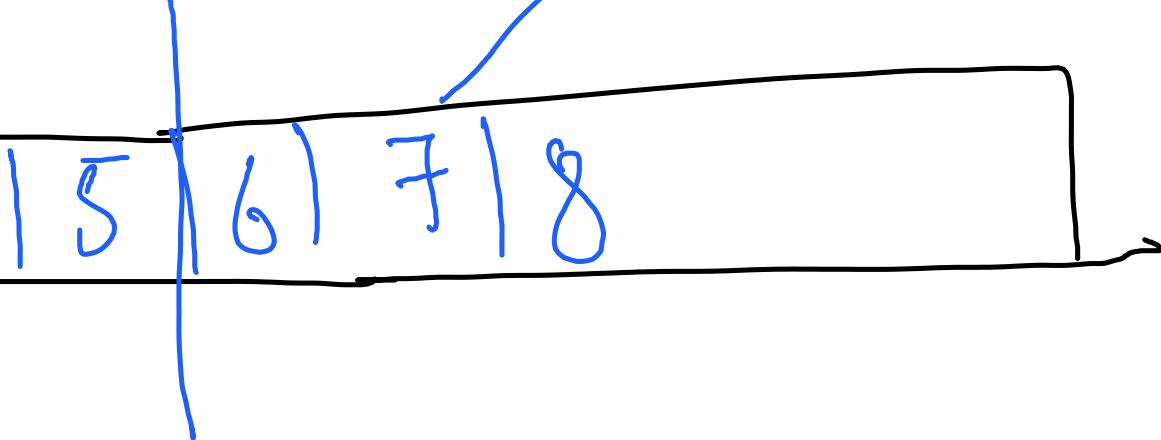
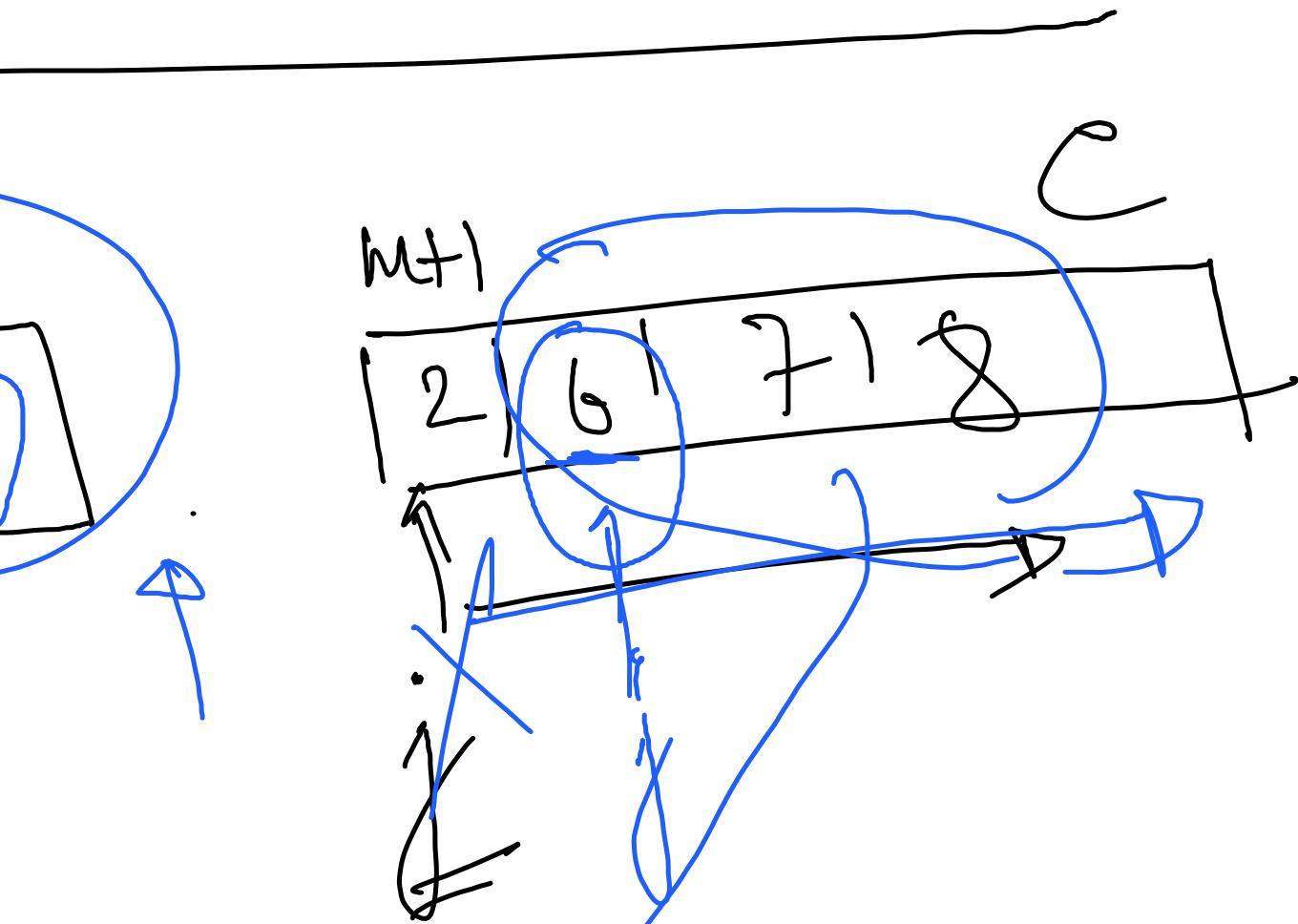






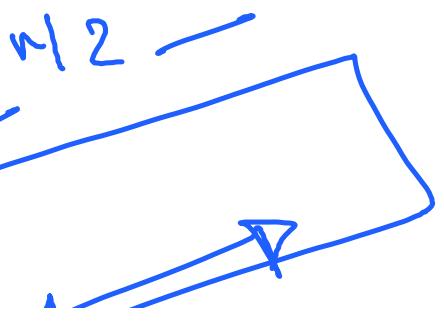
time c

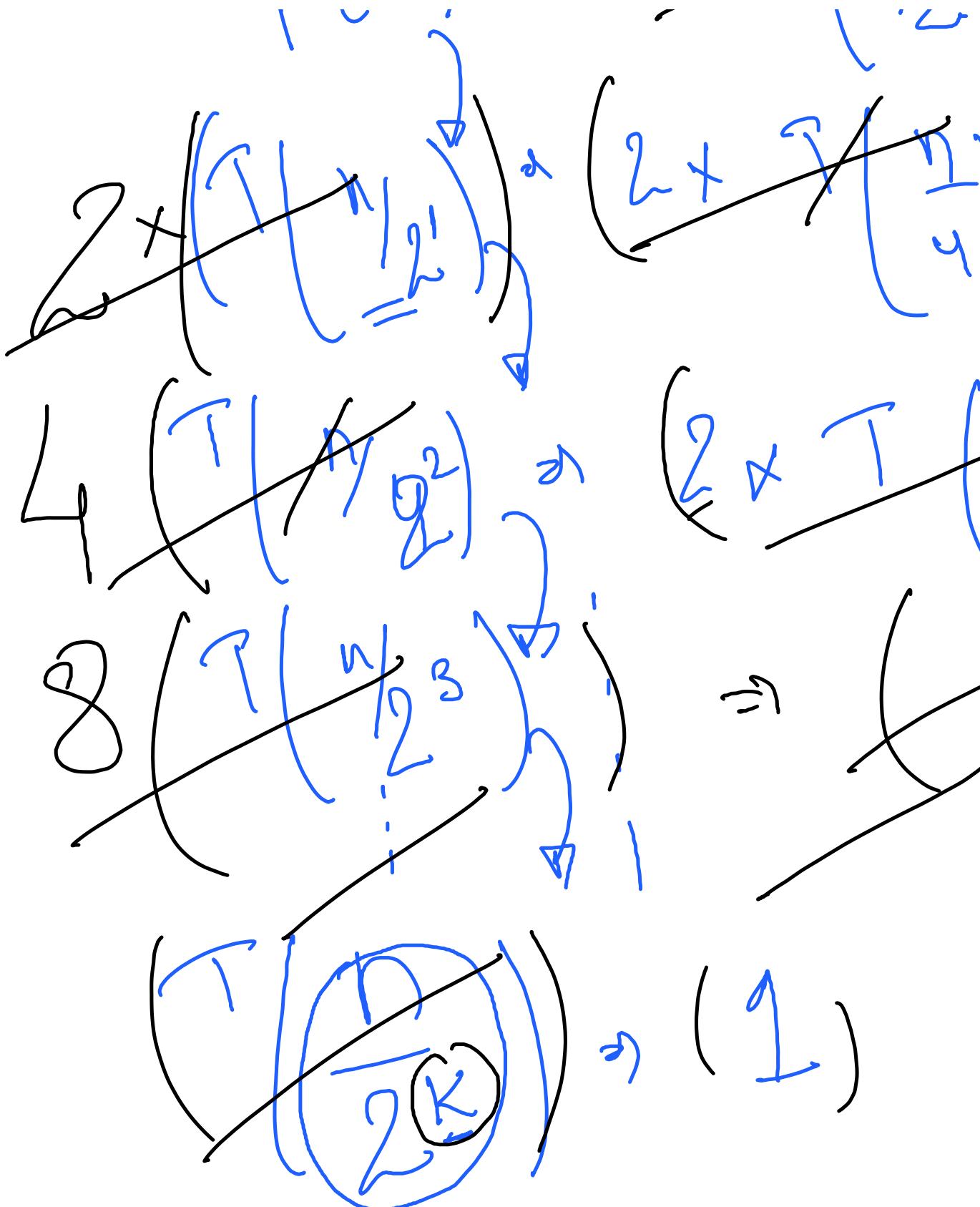
$T(n) \Rightarrow 2 \times T(n/2)$



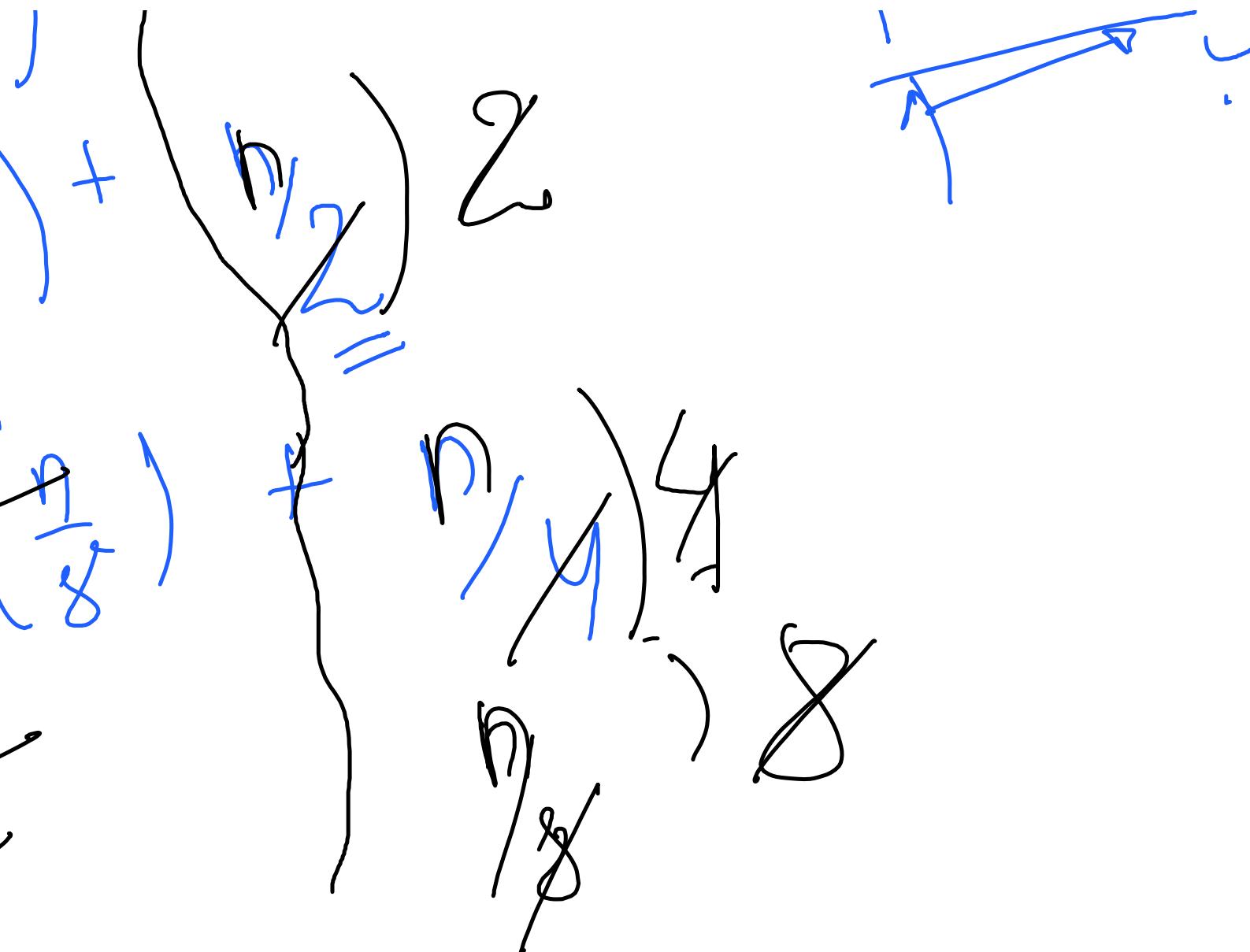
1 + n

u_2





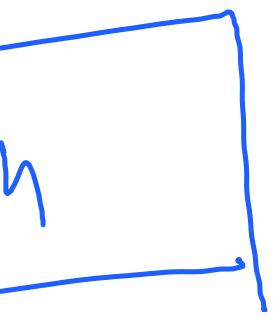
$n \log_2$



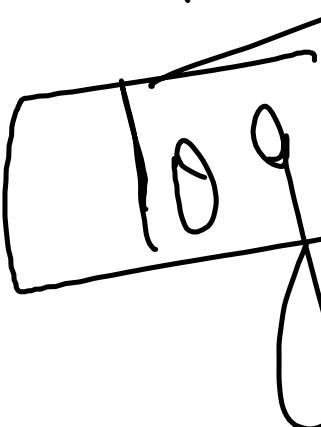
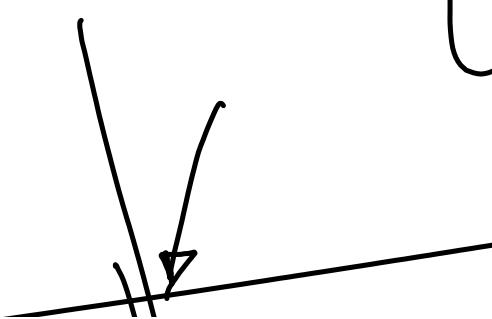
$$\left(\frac{D}{2^K} \rightarrow 1 \right)$$

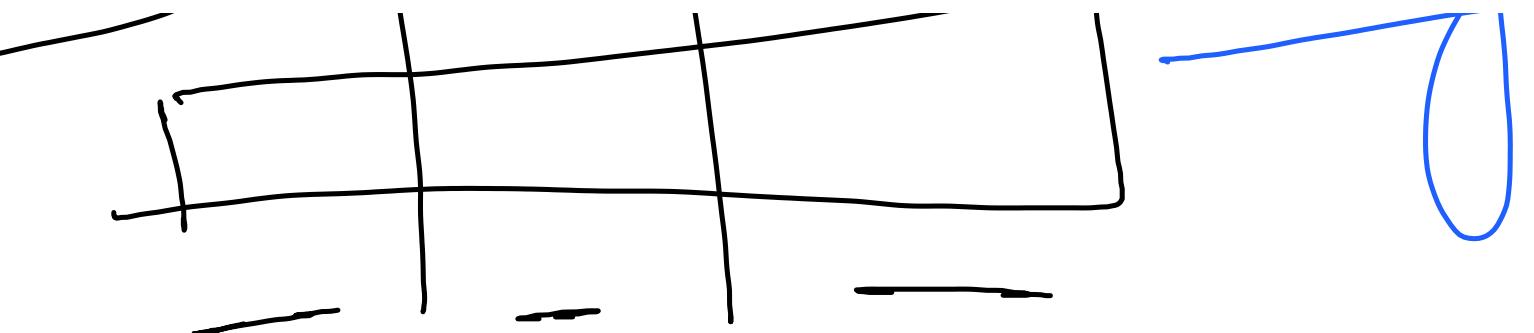
$$K = \log_2$$

~~F~~



$$\frac{n}{2^k}$$

$$n =$$

$$\checkmark$$




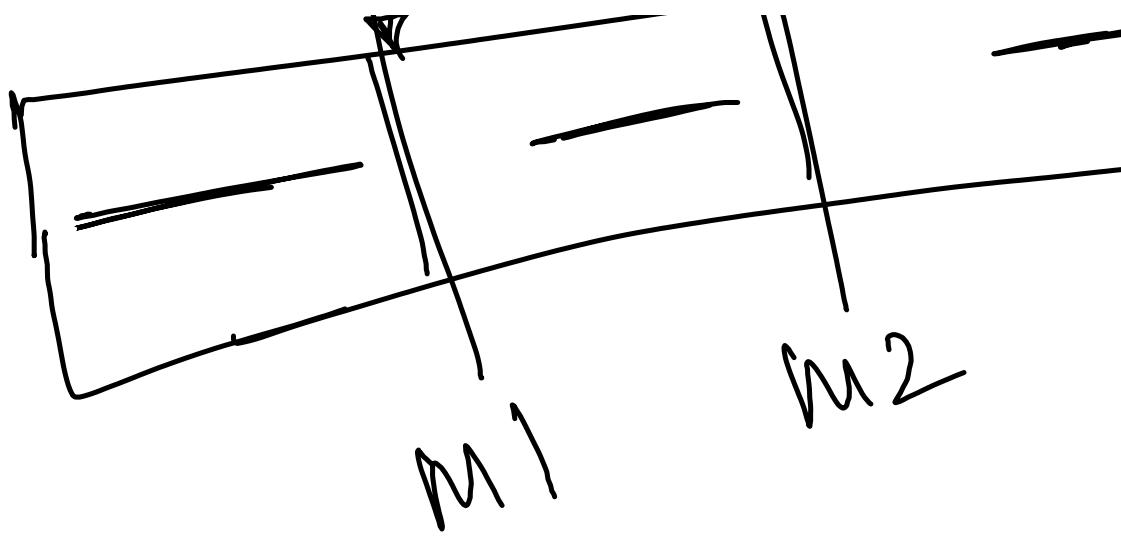
$$3^n = k$$

$$\log_2 n$$



$$n_1 \rightarrow n_{1/2}$$

)



—

12

1)

