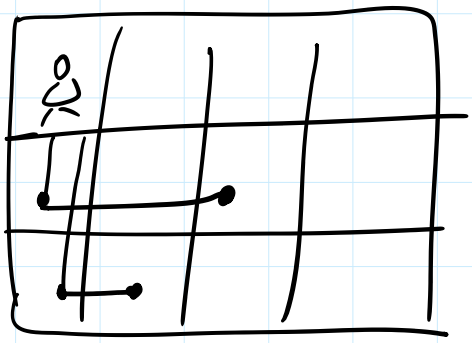
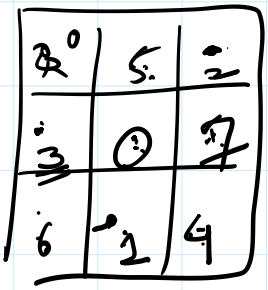
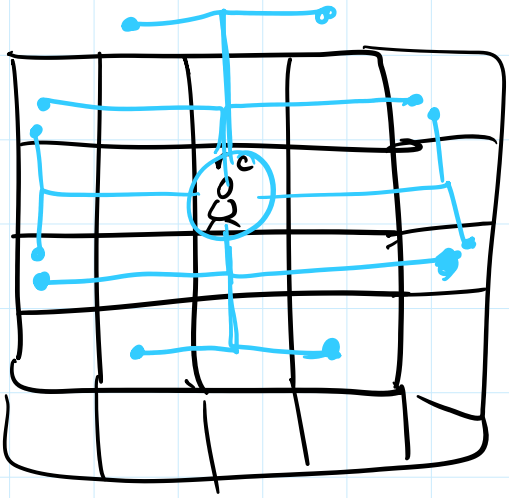
Deepak_Aggarwal(deepak@codingblocks.com)

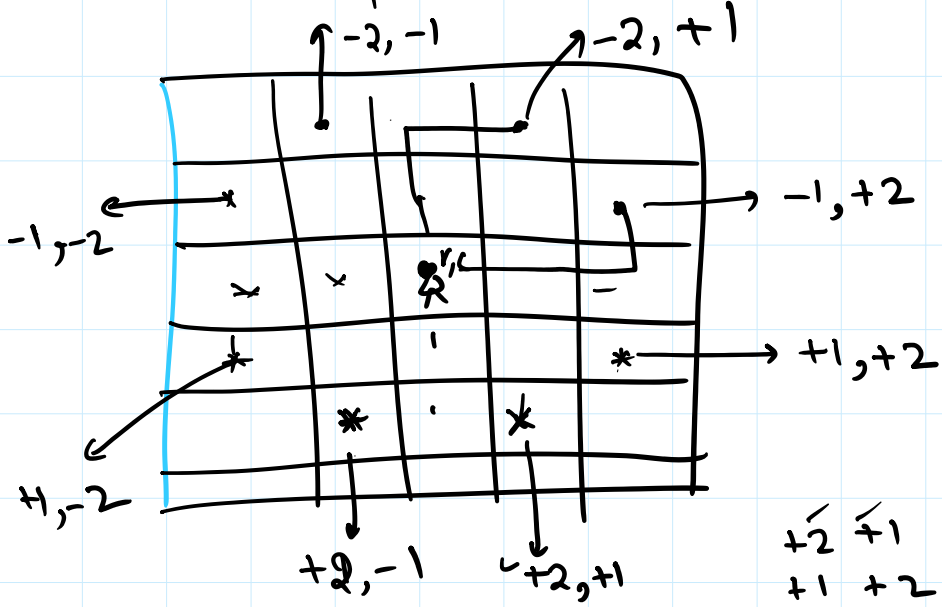
Tuesday, December 26, 2017 10:38 AM



8x8

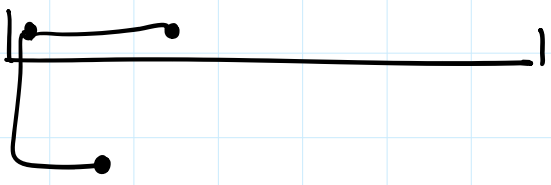


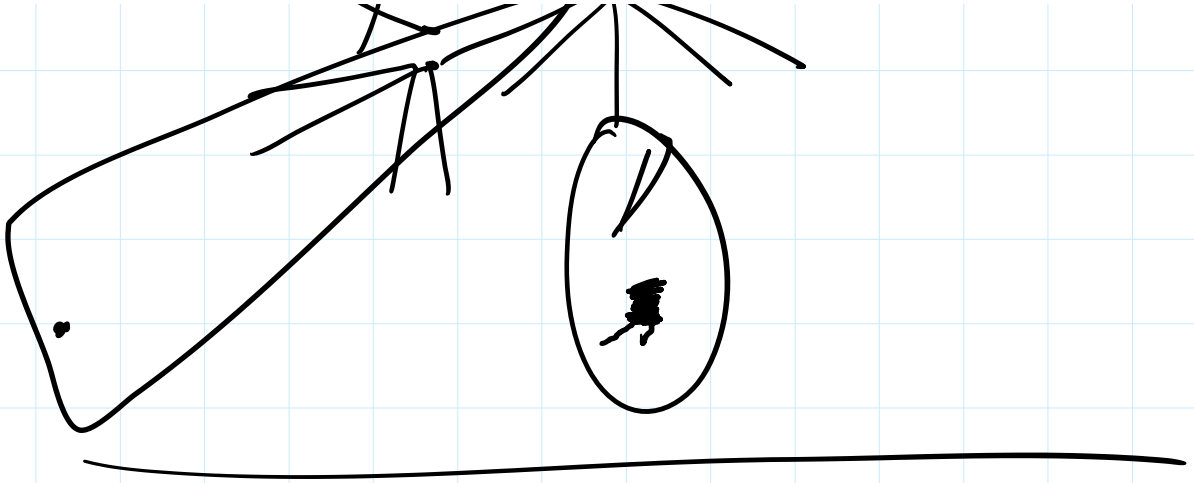




+2 +1 -1 -2 -2 -1 +1 +2

+1 +2 +2 +1 -1 -2 -2 -1





4 3 1 2 5

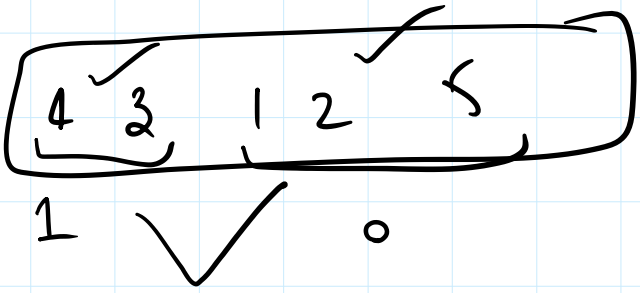
4 1

4 2

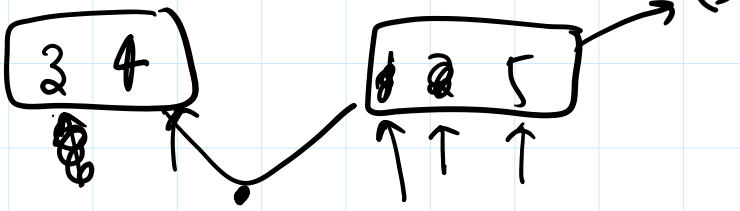
4 3

3 1

3 2

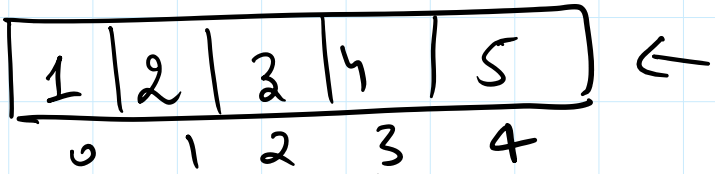


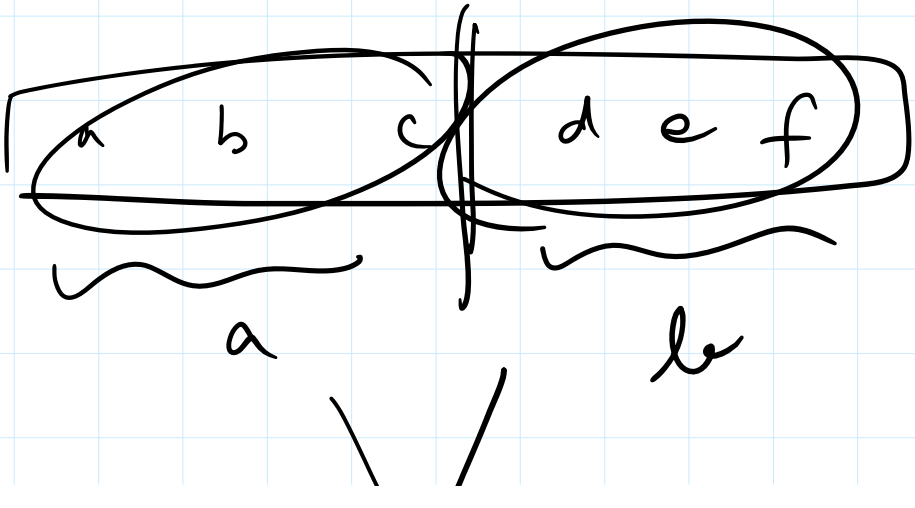
1 + 0 +

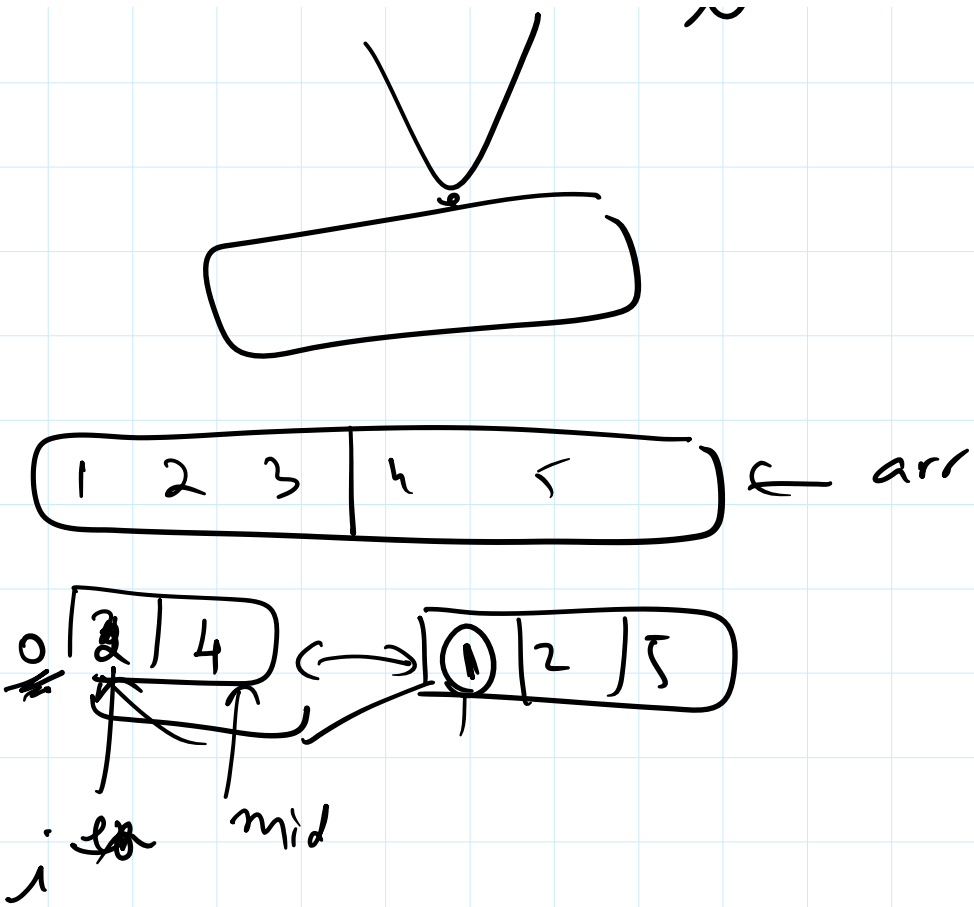


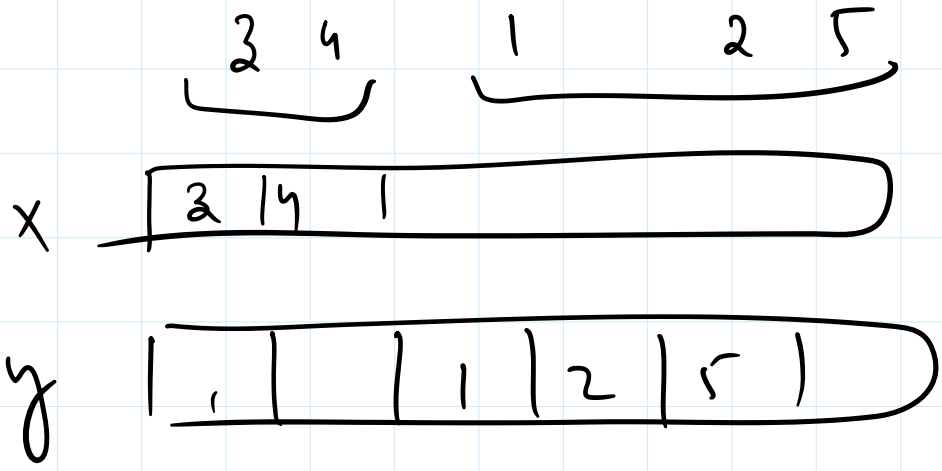
1

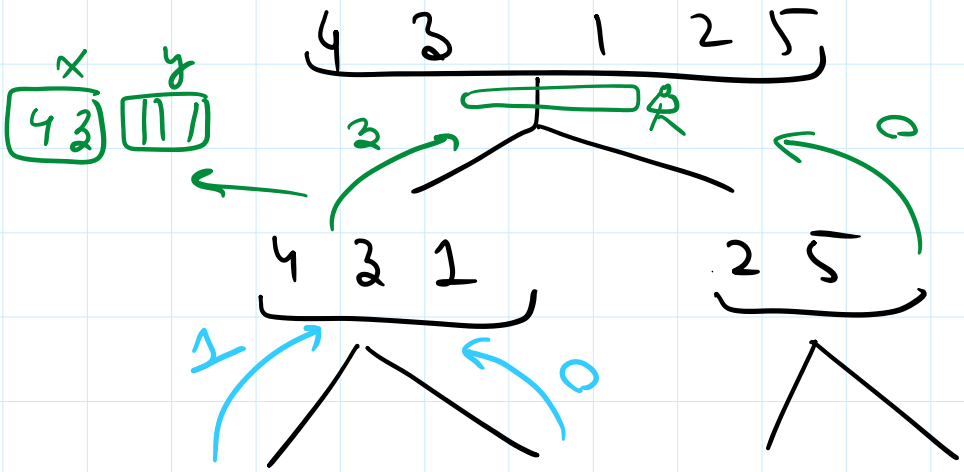
2 + 2

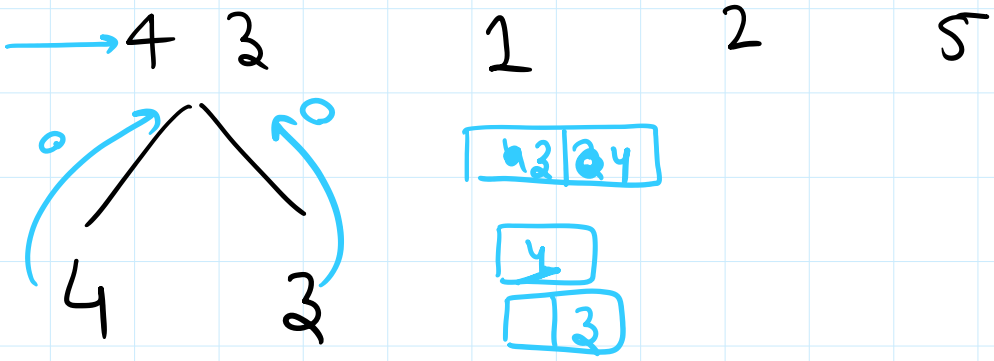





1 2 3 4 5
arr
0
2 4
1 2 5
i
mid


3 4 1 2 5
x
2 4 1
y
1 1 2 5


4 3 1 2 5
x
y
4 3
1 1 1
3
0
4 3 1
2 5
1
0



$$T(n) = T(n/2) + T(n/2) + n$$

$$T(n) = 2T(n/2) + n$$

$$T(n/2) = 2T(n/4) + n/2$$

$$T(n) = 2\left[2T(n/4) + n/2\right] + n$$

$$= 4T(n/4) + 2(\tfrac{n}{2}) + n$$

Gen $= 4T(n/4) + 2n$

After k iter

$$= 2^k T(n/2^k) + kn$$

$$\frac{n}{2^k} = 1$$

$$k = \log_2 n$$

$$= 2^{\log_2 n} T(1) + n(\log_2 n)$$

$= 2^{\log_2 n} T(1) + n(\log_2 n)$

$= \boxed{n + n \log_2 n}$

1 3 5 7 8 10

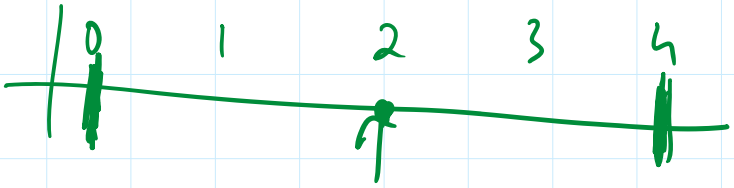
8

1 2 2 2 2 3 3 3

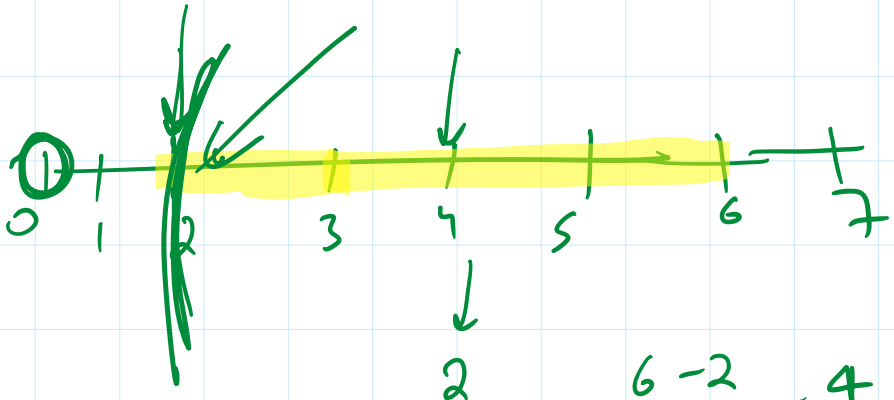
lowerbound

upperbound

8 4 3 7 3



$\left(\frac{4-0}{2}\right) = 2$ (/2)

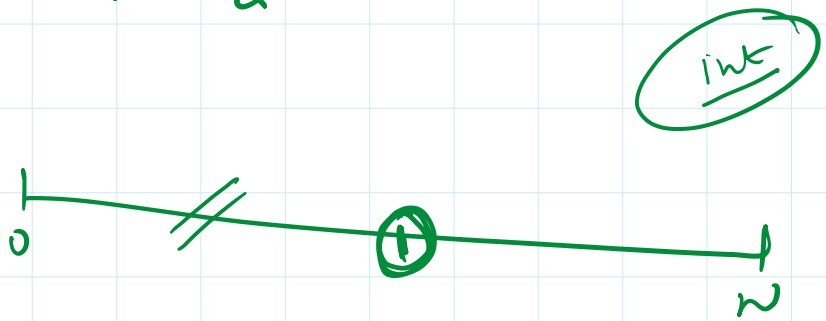


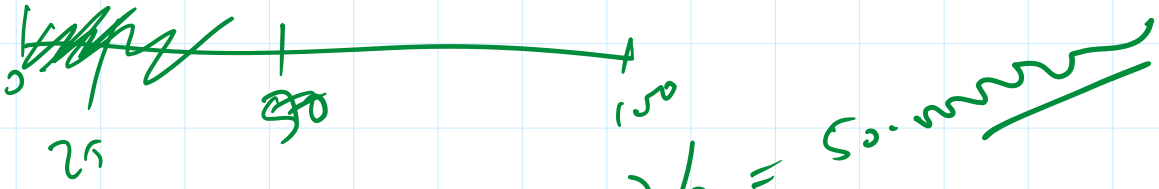
2 $\frac{6-2}{2} = \frac{4}{2} = 2$

100 9

1 x 2 3 4 5 ... 9 10 11

1 2 3





2.313

2.313636

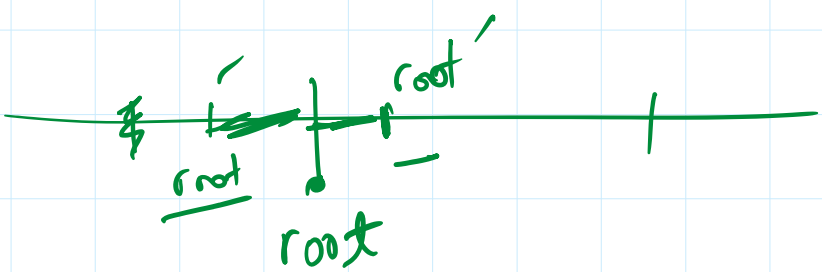
10.0 == 3.33

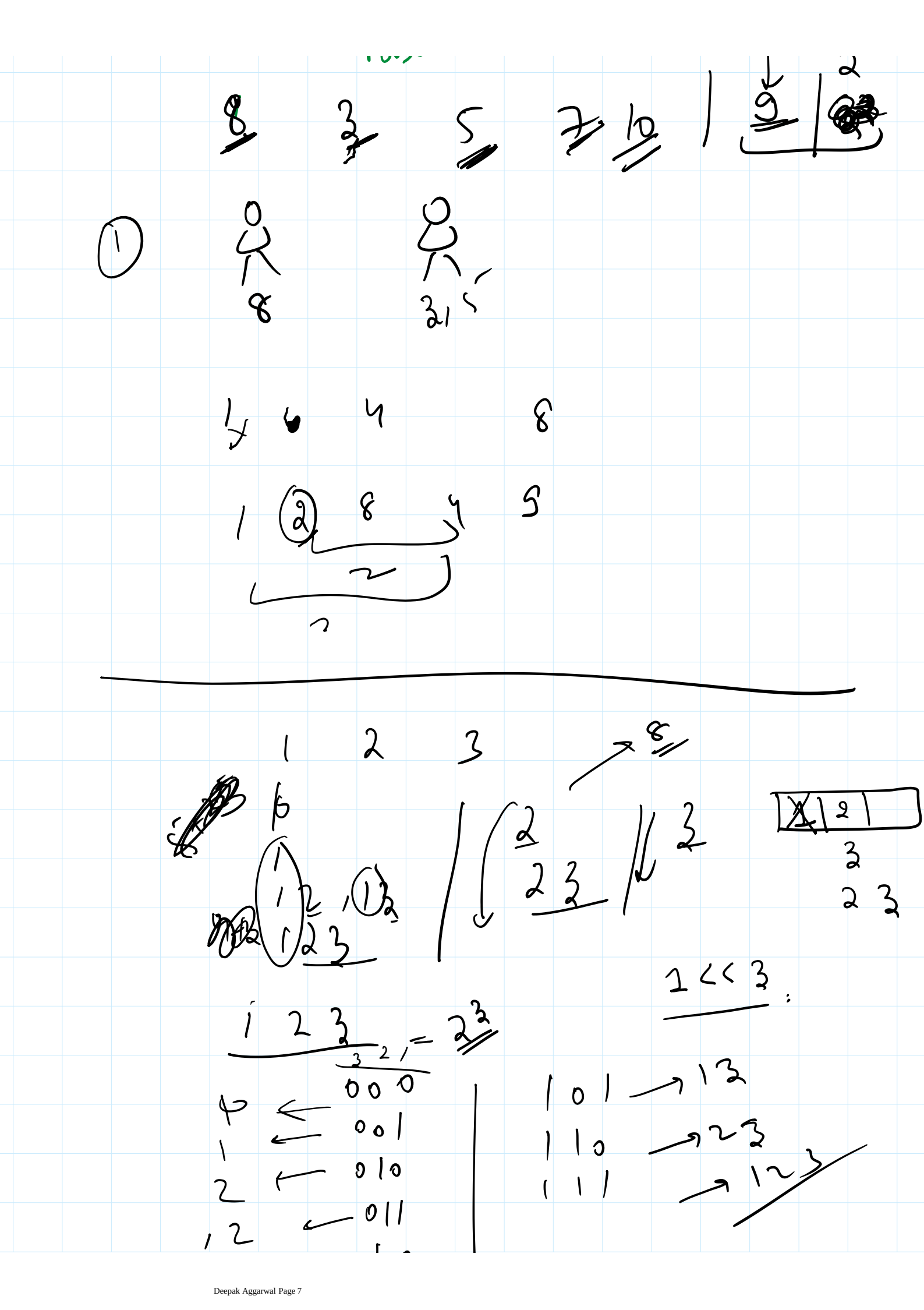
3.0

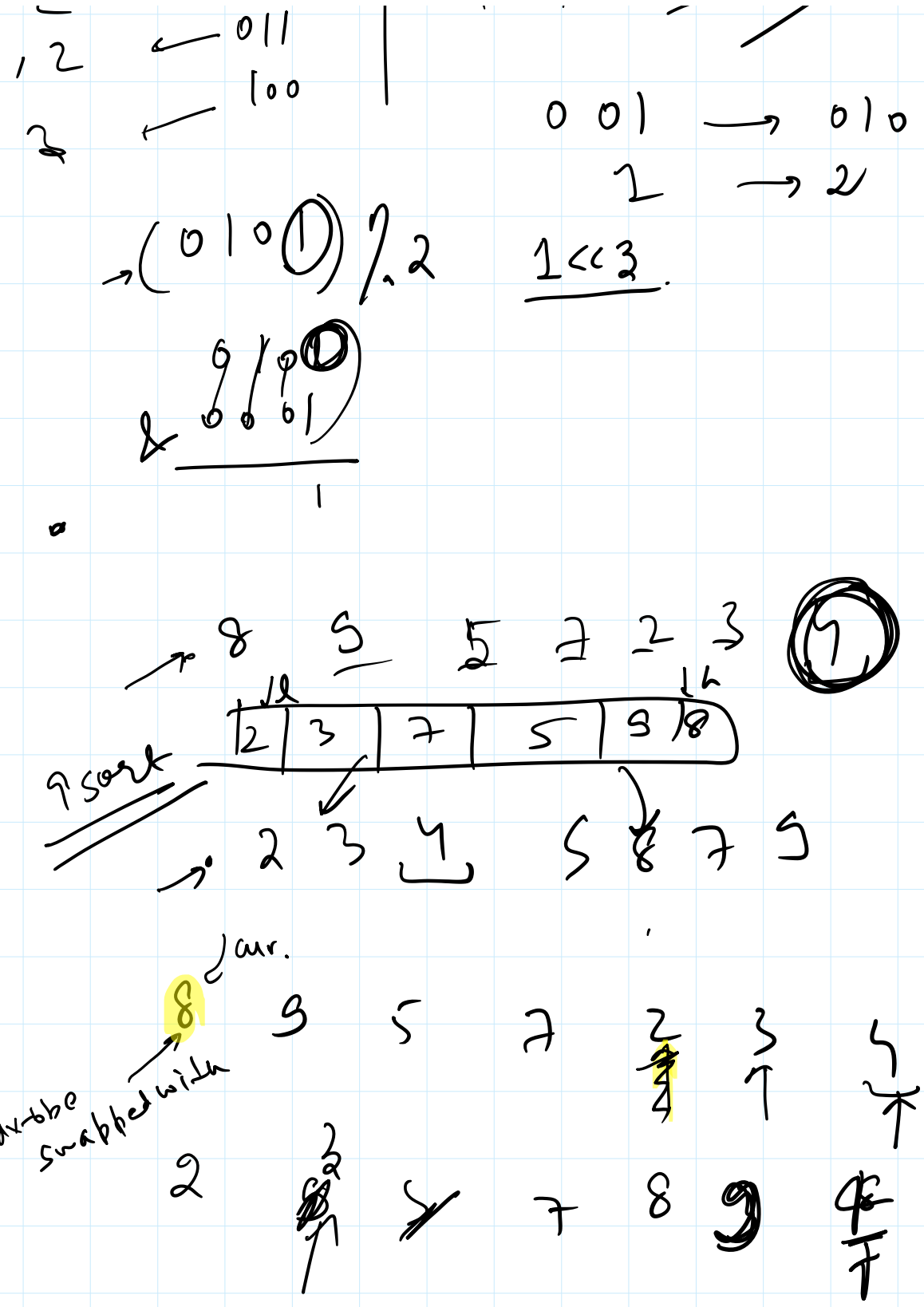
2.0001

2.0010

0.0009







cb. lk / feedback

→ quick sort → Aggressive cows

→ Subset →

→ ~~Power~~ Subset →