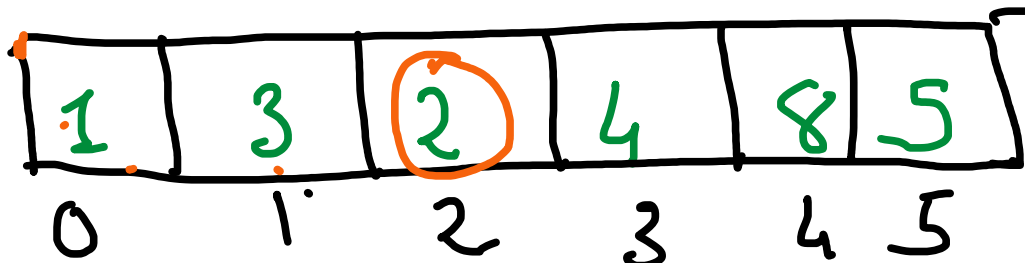


Quick Select -

→ like quick sort,

Sort entire array.

Q Search single elem $k = 2^{nd}$ largest



1. naive one } \Rightarrow sort it } \Rightarrow return k^{th} index.

A } $A = O(x)$ }
B } $B = O(x^2)$

Bubble

Selection

Insertion

merge

Quick sort

$O(n \log n)$

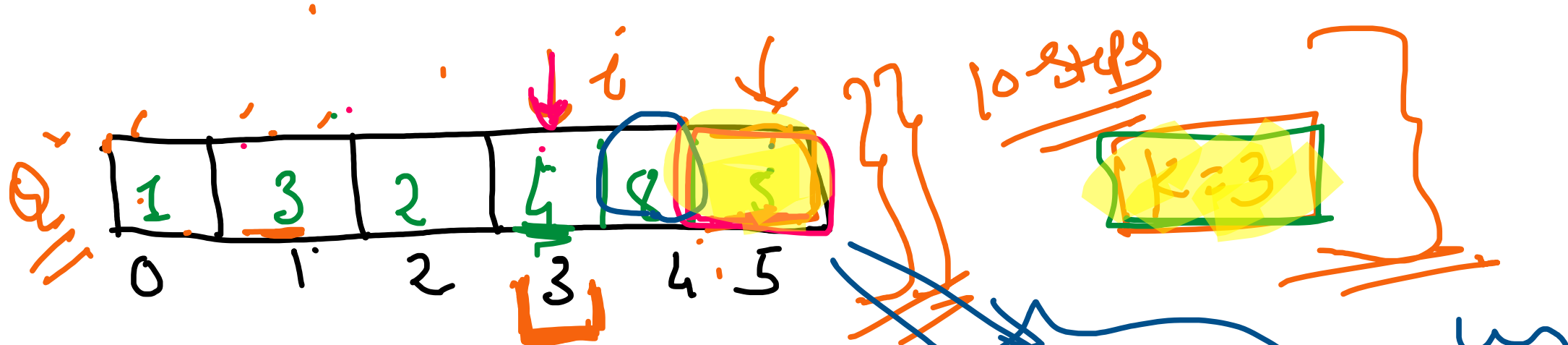
$O(n^2)$

$SC = O(n)$

$SC = O(\log n)$

TC

SC



Pivot - 5 } $i++$ }
1 < 5 } swap

3 < 5 } swap

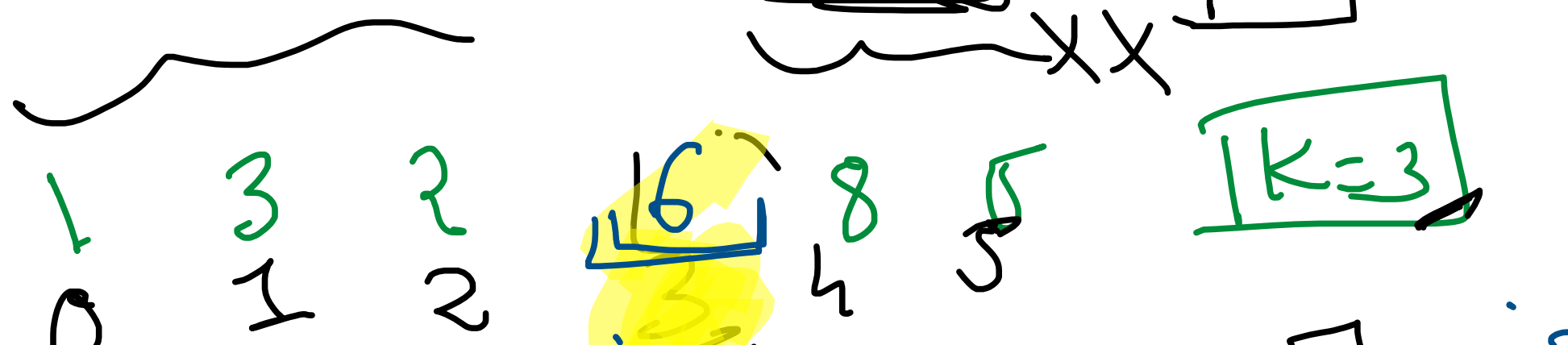
2 < 5 } swap

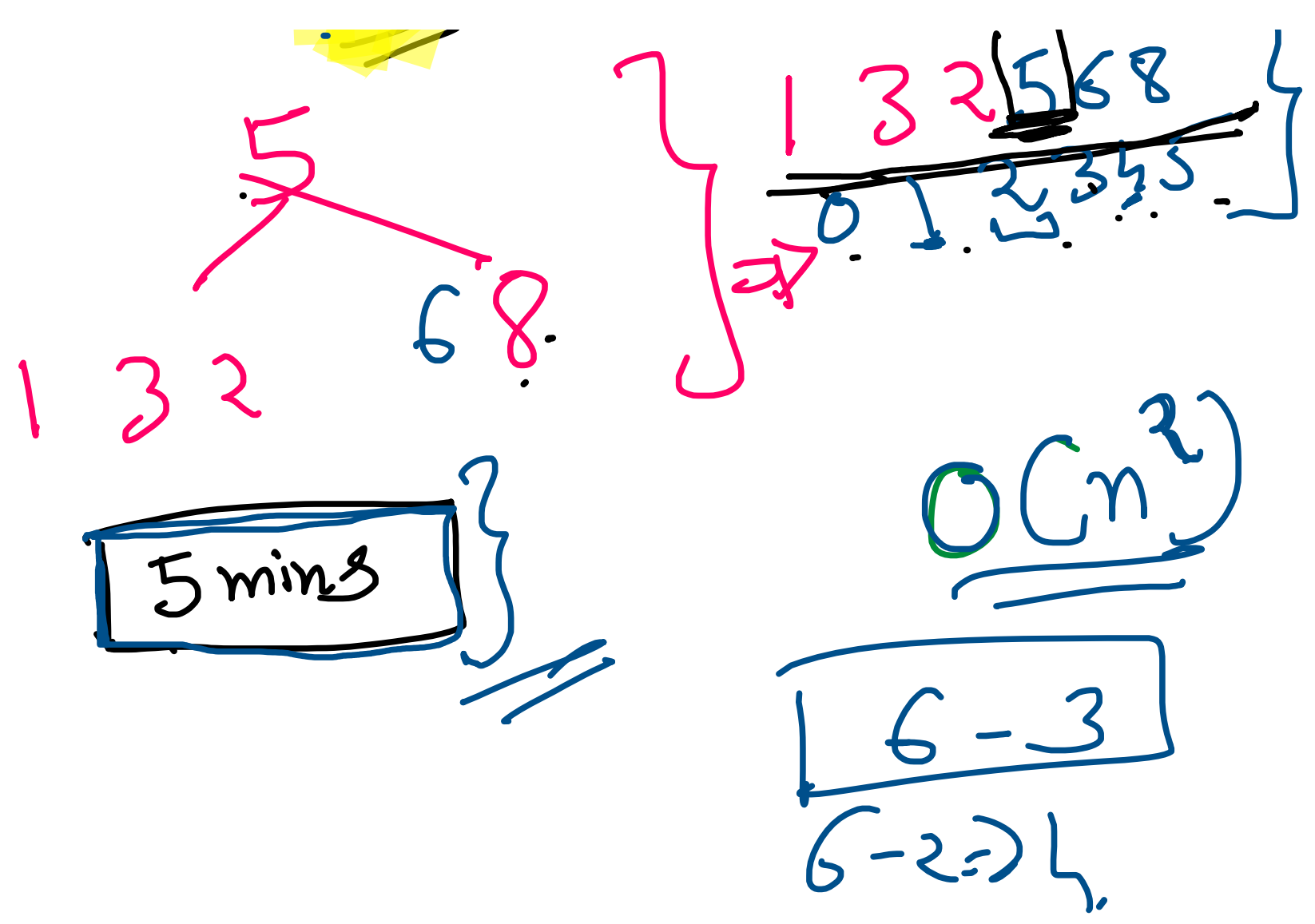
4 < 3 } x

arr

arr[k]

xx





1 3 2 6 8 5 k=4

