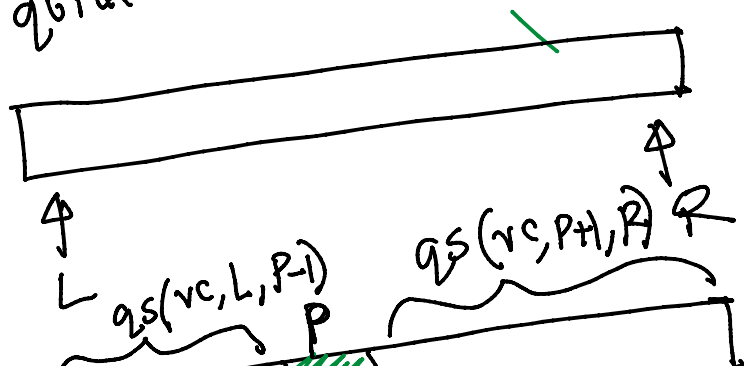
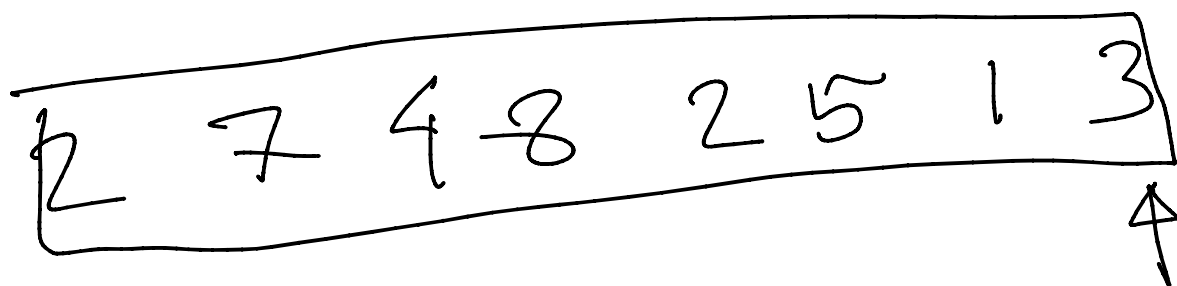
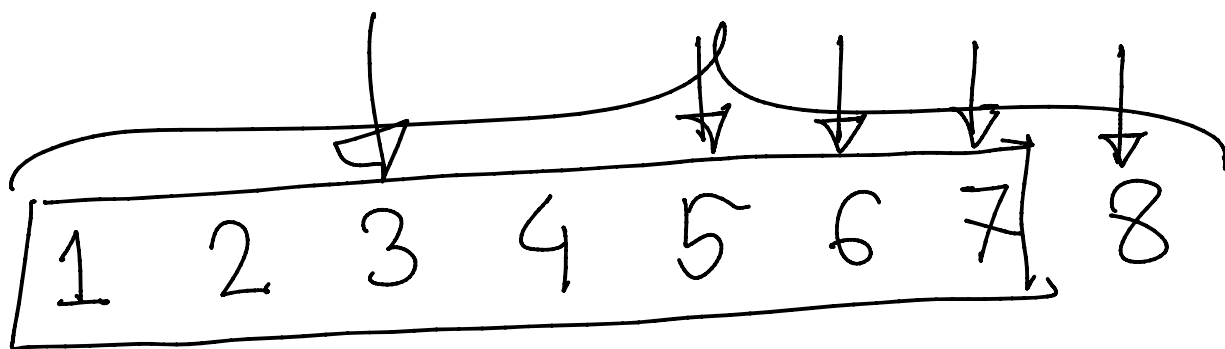
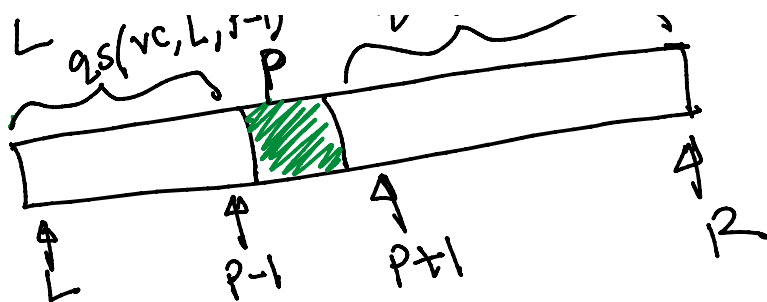


quick-sort(vc, L, R)





Quick Partition $K=2$

$n \rightarrow \text{sort} \rightarrow K$

$O(n) \rightarrow O(1)$ $K=3$

$-7, 1, 3, 5, 8, 11, 20, 23$

$5, 1, 23, 8, 20, -7, 11, 3$

$1, 2, 5, 11, 23, 20$

6 8 5 11 23 20

5, 23, 8, 20, 11

↑

$\boxed{N} \rightarrow O(N)$

$\boxed{N/2} \rightarrow O(N/2)$

$\boxed{N/4} \rightarrow O(N/4)$

$N + N/2 + N/4 + N/8 + \dots + 1$ $\boxed{N/8}$

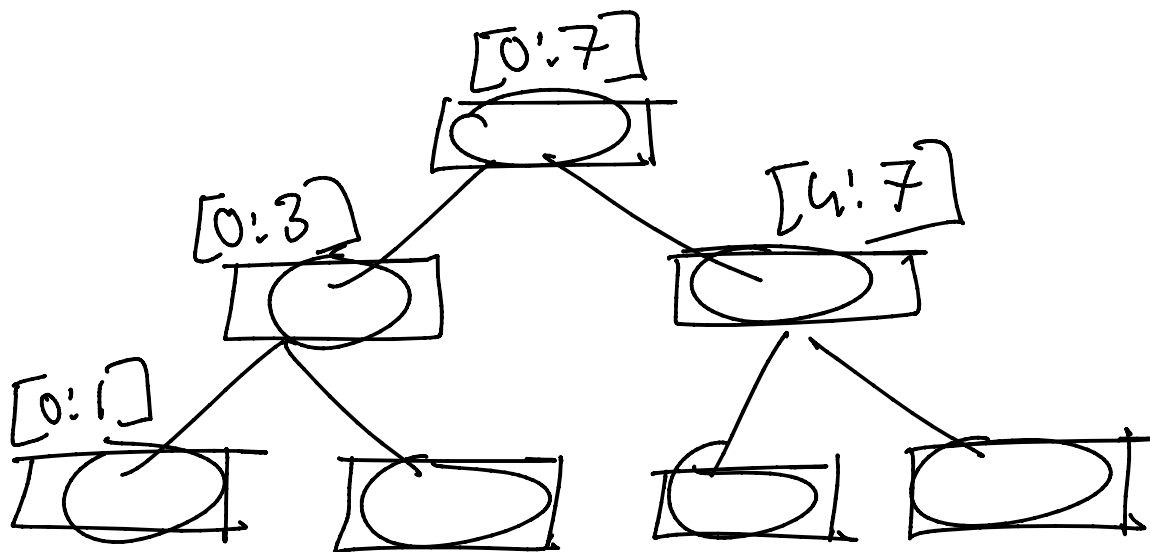
$= N(1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots)$ \vdots

$= N(2) = 2N \rightarrow O(N)$

$3^4 \rightarrow 9 \times 9 \rightarrow 81$

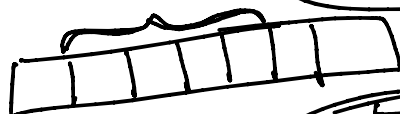
$\bigcirc * \bigcirc * \bigcirc * \bigcirc * \bigcirc$

3 3 3 3



1 1 2 3 5 7

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



1 2 5 6 3 4 7

