Quick select

5 7 2 10 1 8

→ Find K^{th} smallest

E.g → ~~3rd~~ Smallest

① → Sort array → comp($n \log n$)

② → arr[n-3]

How to do in O(n)?

* Use partitioning

5 7 2 1 0 1 8

5 7 2 1 8 10

3rd smallest → arr[2] ↳ pivot

* pivot index != 3rd smallest

5 7 2 1 | 8 | 10

↳ 3rd smallest will be here

↳ partition this again