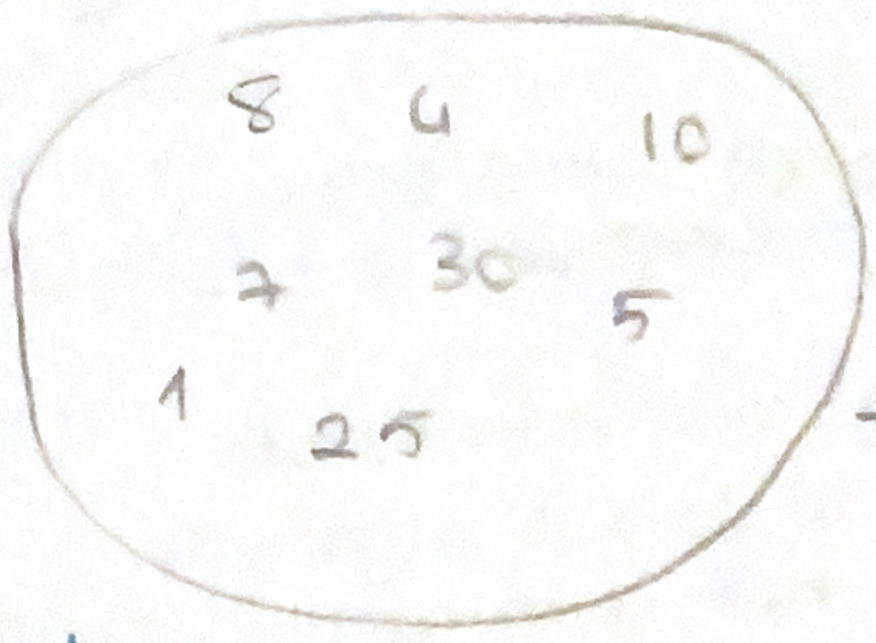
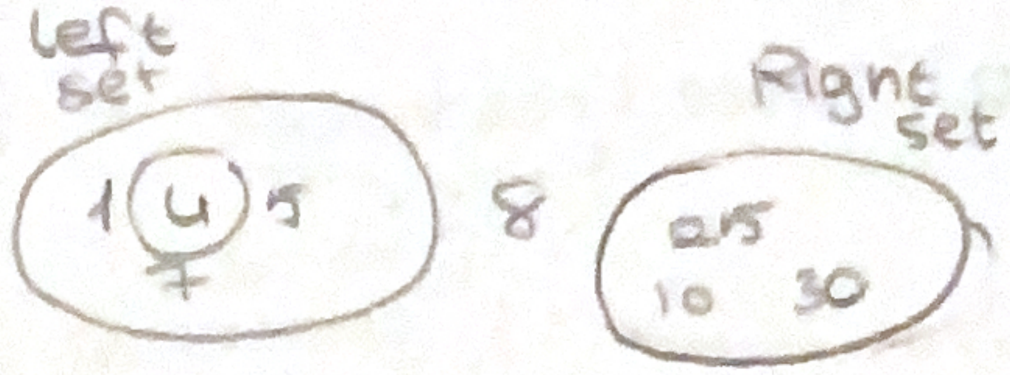
Quicksort

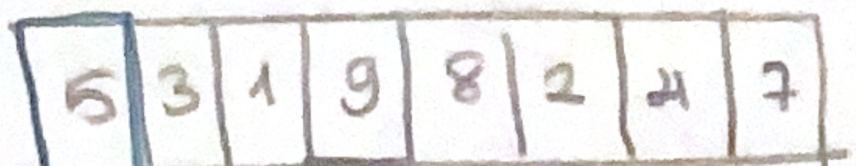


1. Select a pivot v → 8 (Random selection)



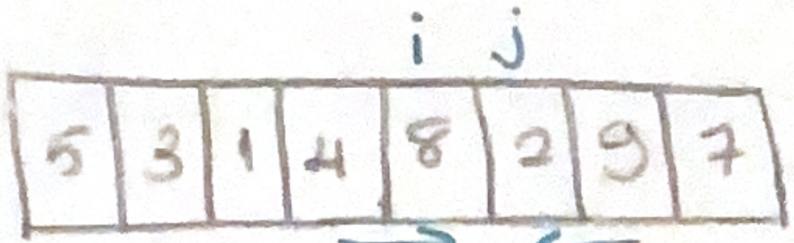

```
Quicksort(A,p,r){
  if (p < r) {          q=Partition(A,p,r)
    left index  right index
                        Quicksort(A,p,q-1)
                        Quicksort(A,q+1,r)}}
```

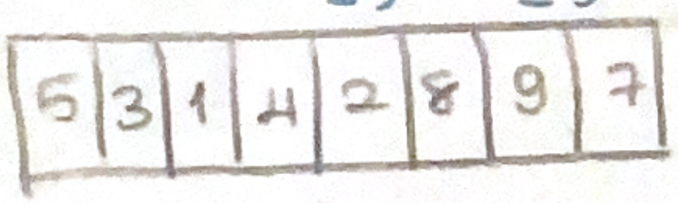
pivot

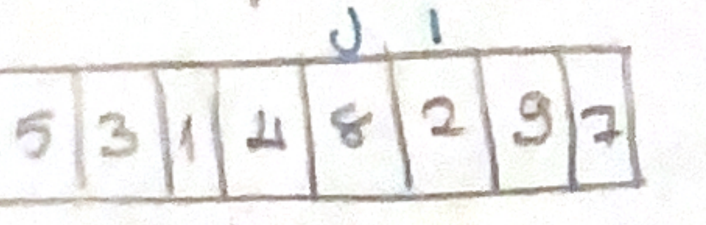


j stops here

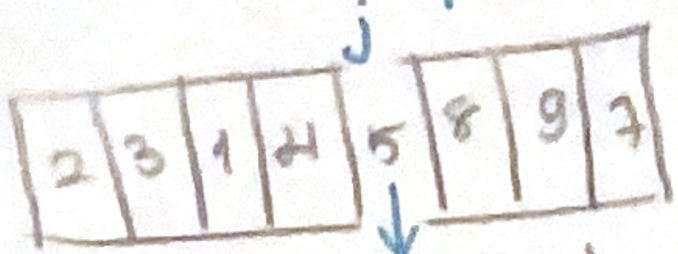
i look for items ≥ 5 — i stops here — j look for items ≤ 5







↓ swap j with pivot (pivot hep ortada kalsın)



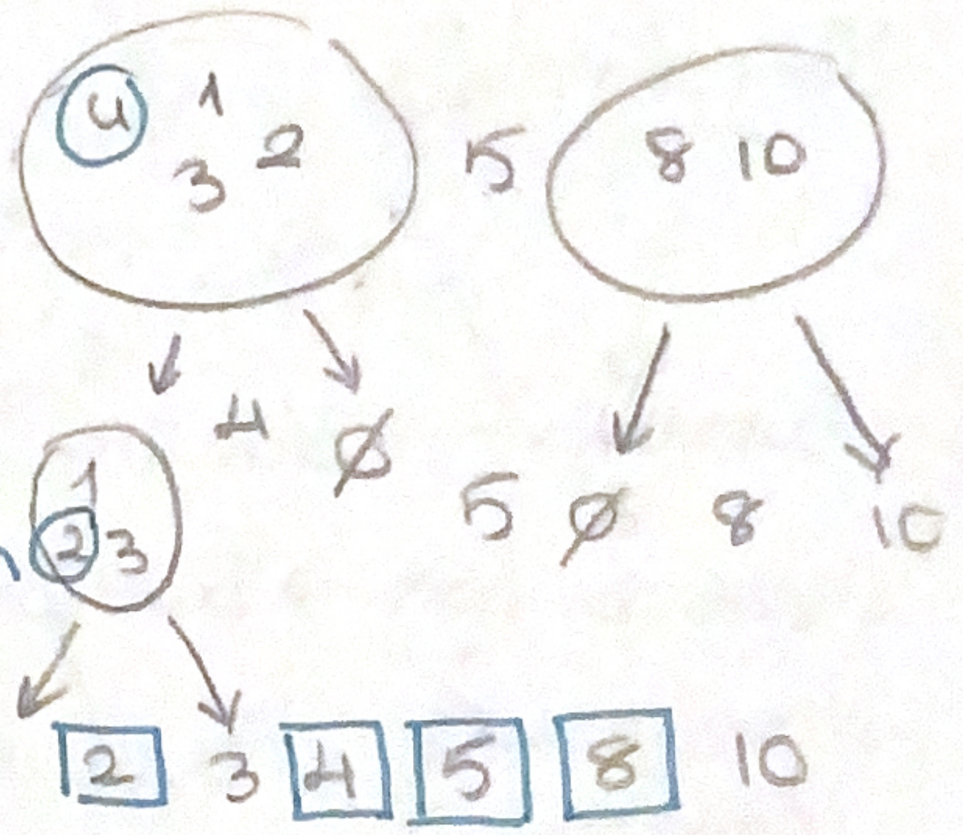
call quicksort for this

doesn't move again

call for this

1st it

Partition




```
Partition (A[l..r])
p = A[l]
i = l
j = r+1
do
  do i = i+1 until A[i] ≥ p
     j = j-1 until A[j] ≤ p
  swap(A[i], A[j])
until i ≥ j
swap(A[i], A[j]) → undo last swap
swap(A[l], A[j])
return j
```

pivotdan büyük elemanı bul