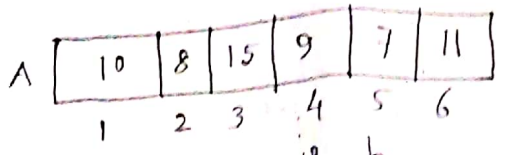
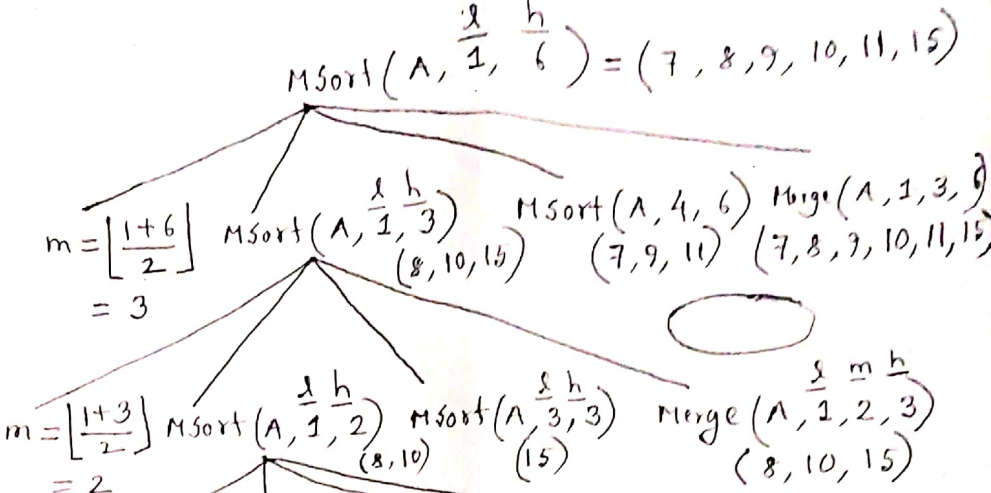
Merge Sort:

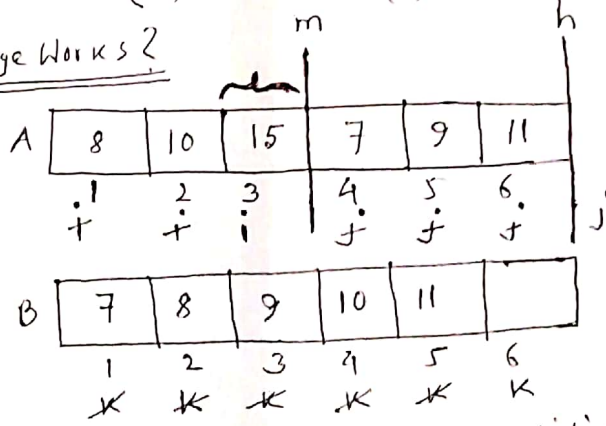
```
Procedure MSort(A, l, h){
  if(h>l){
    m = ⌊(l+h)/2⌋
    MSort(A, l, m)
    MSort(A, m+1, h)
    Merge(A, l, m, h)
  }
}
```

```
Procedure Merge(A, l, m, h){
  i = l
  j = m+1
  k = l
  while((i<=m) && (j<=h)){
    if(A[i] > A[j]){
      B[k] = A[j]
      j = j+1
      k = k+1
    }
    else{
      B[k] = A[i]
      i = i+1
      k = k+1
    }
  }
  if(i>m)
    for p = j to h
      B[k] = A[p], k = k+1
    end for
  else for p = i to m
      B[k] = A[p], k = k+1
    end for
  for p = l to h
    A[p] = B[p]
  end for
}
```



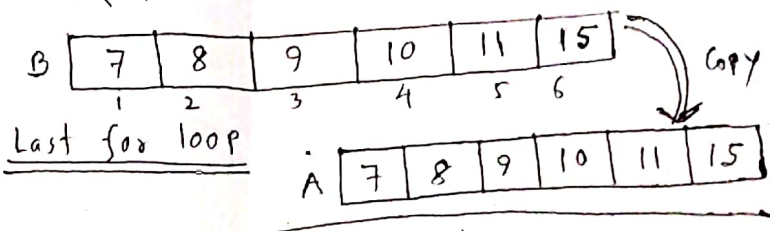


How merge Works?



Here j>h while loop condition false

if(i>m) ⇒ condition false ⇒ else



Last for loop