

# Merge Sort

PAGE No.	
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Q. Sort the array using Merge sort and also show split tree and merge tree for the same

310, 285, 179, 652, 351, 423, 861, 254, 450, 520

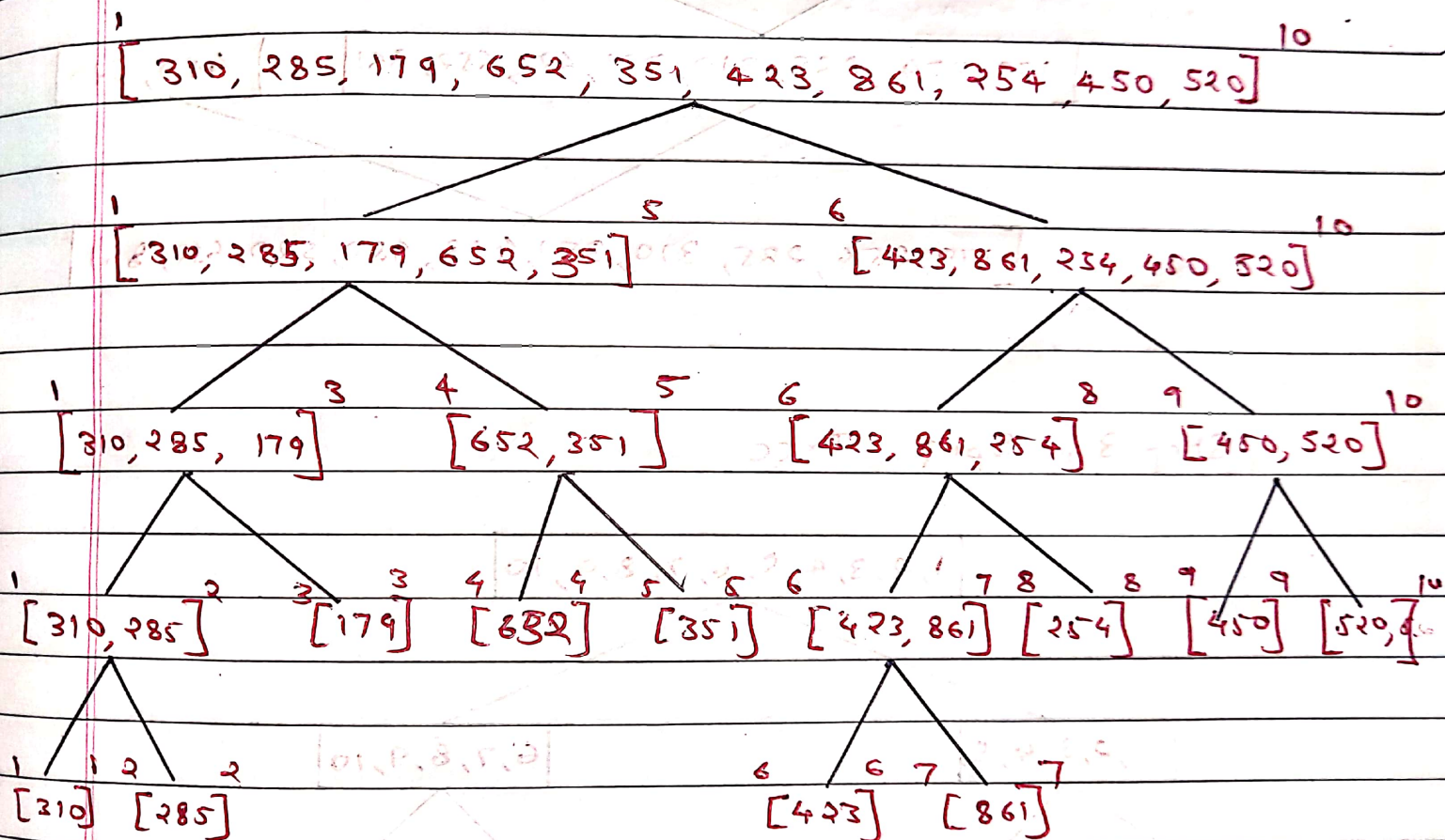
Sol<sup>n</sup>:

[310] [285] [179] [652]

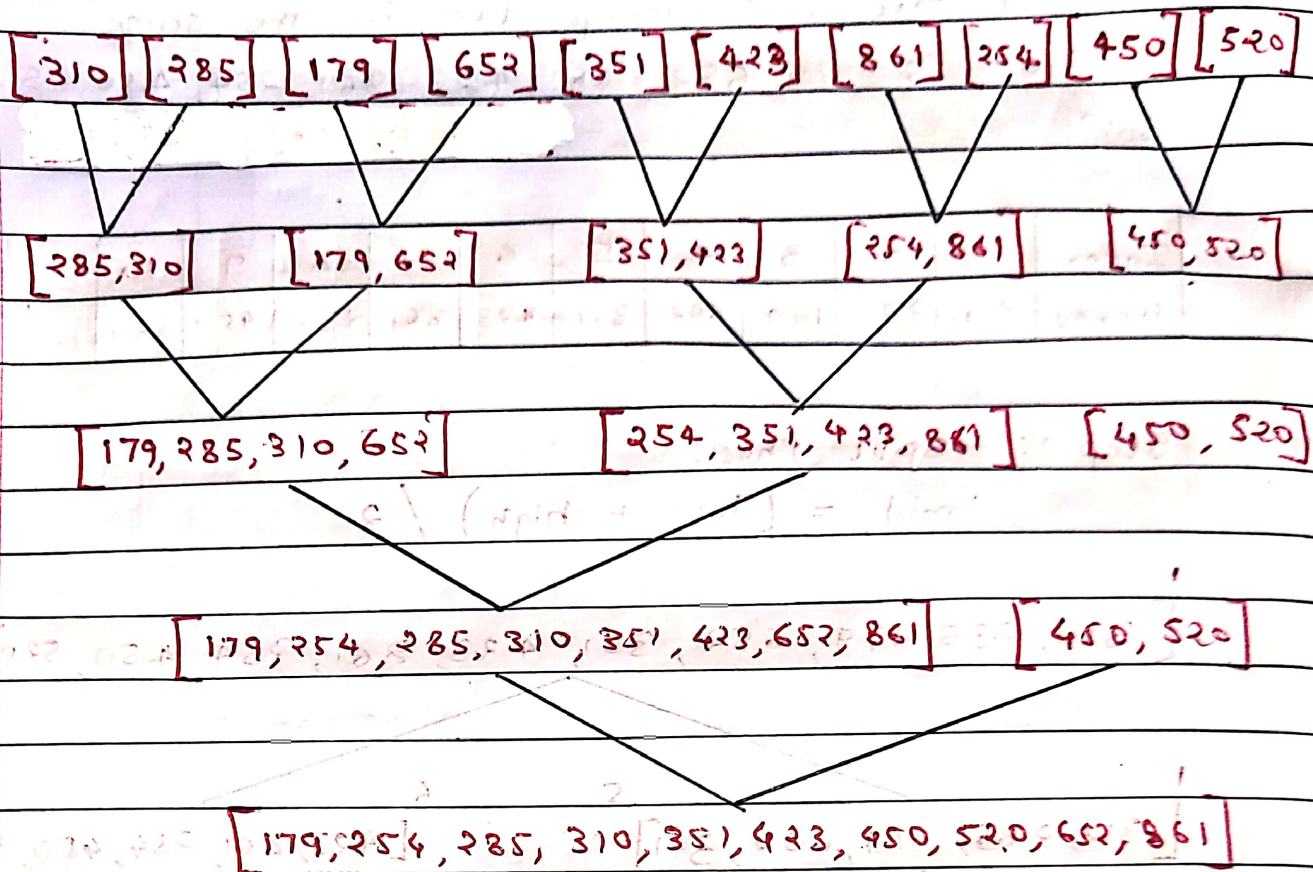
Index	1	2	3	4	5	6	7	8	9	10
Array	310	285	179	652	351	423	861	254	450	520

Step 1: Split Phase

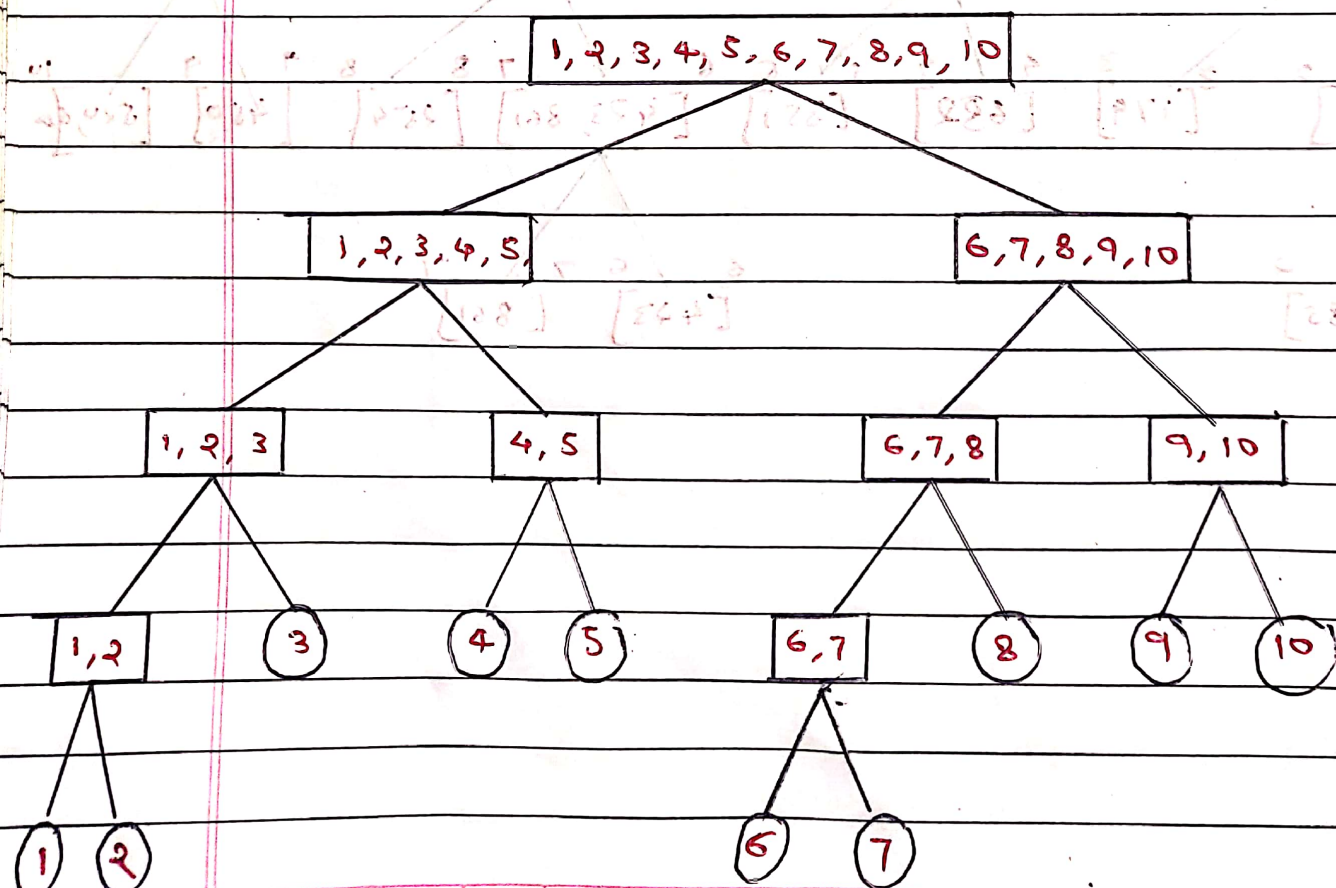
$$\text{mid} = (\text{low} + \text{high}) / 2$$



## Step 2: Merge Phase

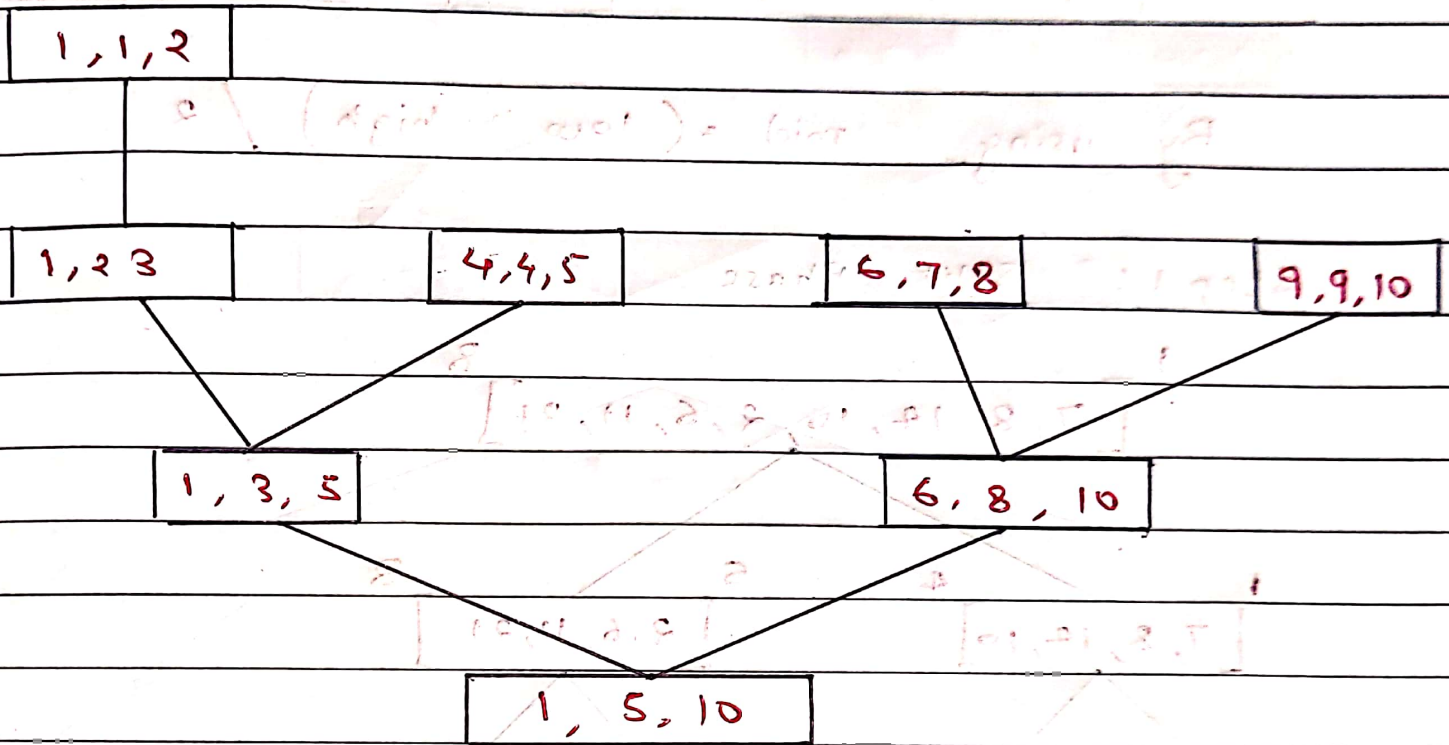


## Step 3: Split Tree





## Step 4: Merge Tree



$$\text{mid} = (\text{low} + \text{high}) / 2$$

Q. Sort the array using Merge Sort and also draw split tree and merge tree for the same.

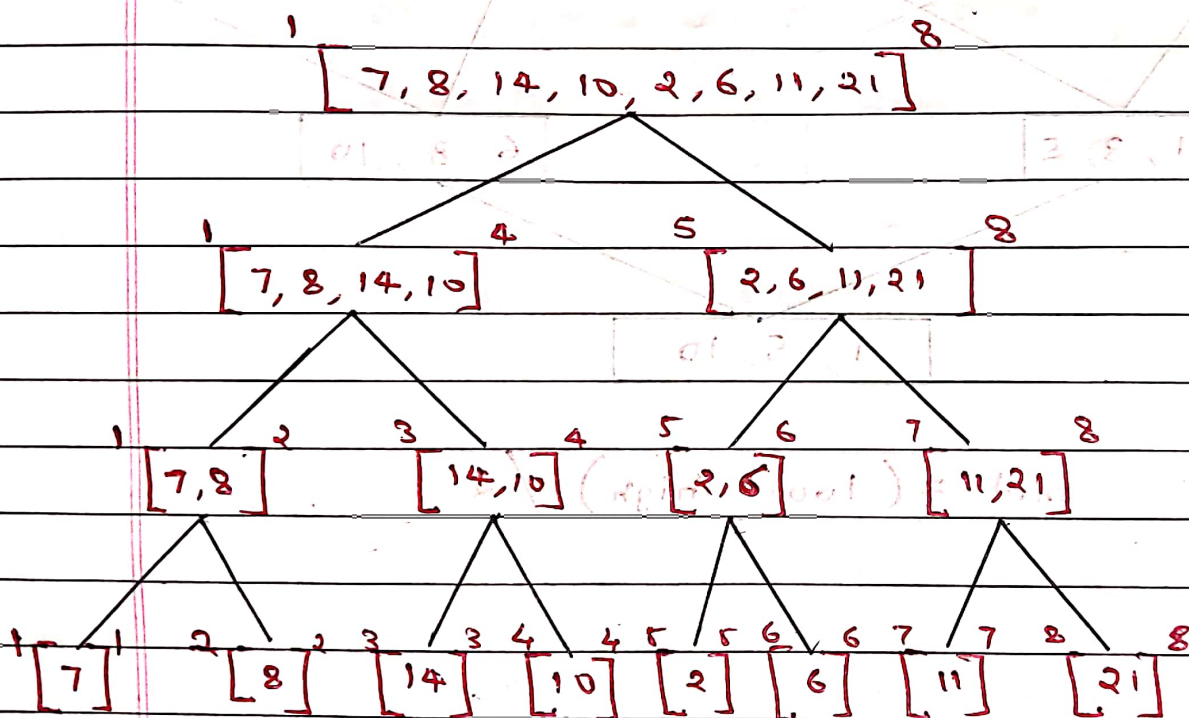
7, 8, 14, 10, 2, 6, 11, 21

Sol<sup>n</sup>:

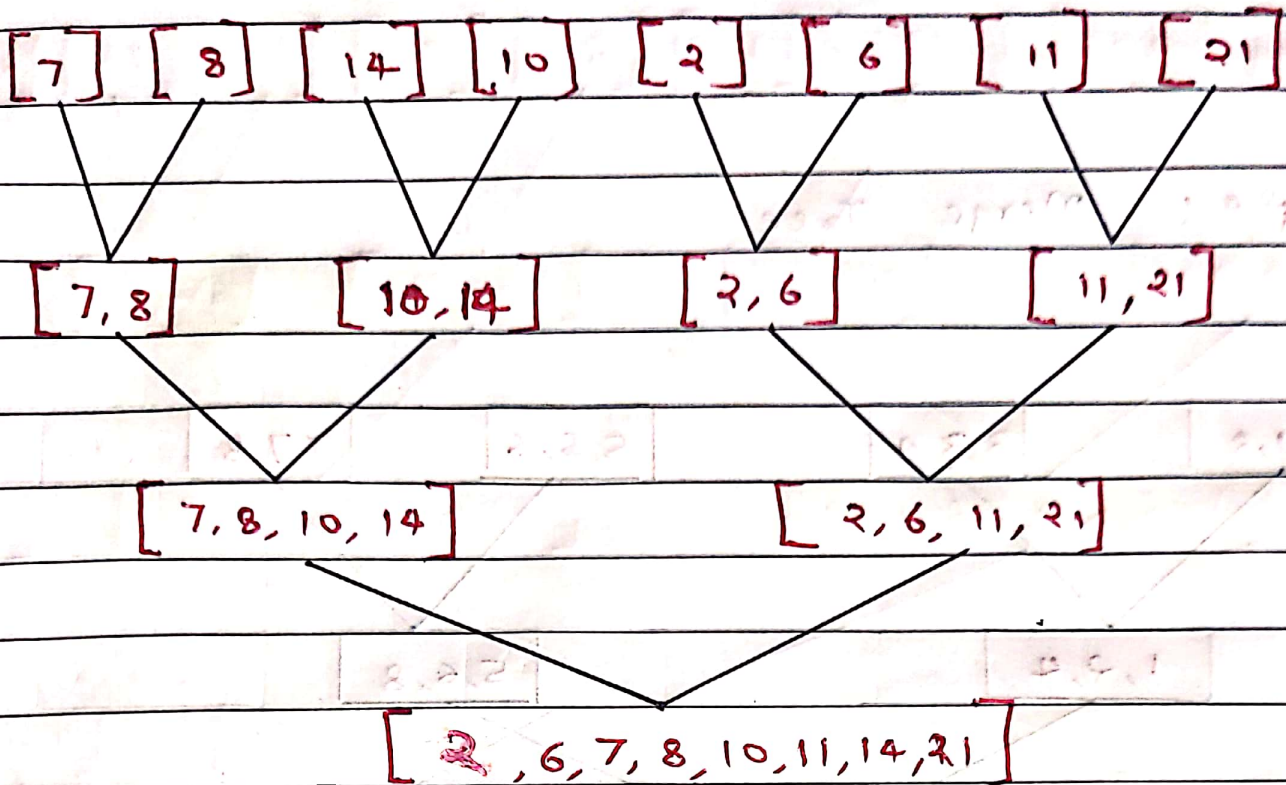
Index	1	2	3	4	5	6	7	8
Array	7	8	14	10	2	6	11	21

By using,  $\text{mid} = (\text{low} + \text{high}) / 2$

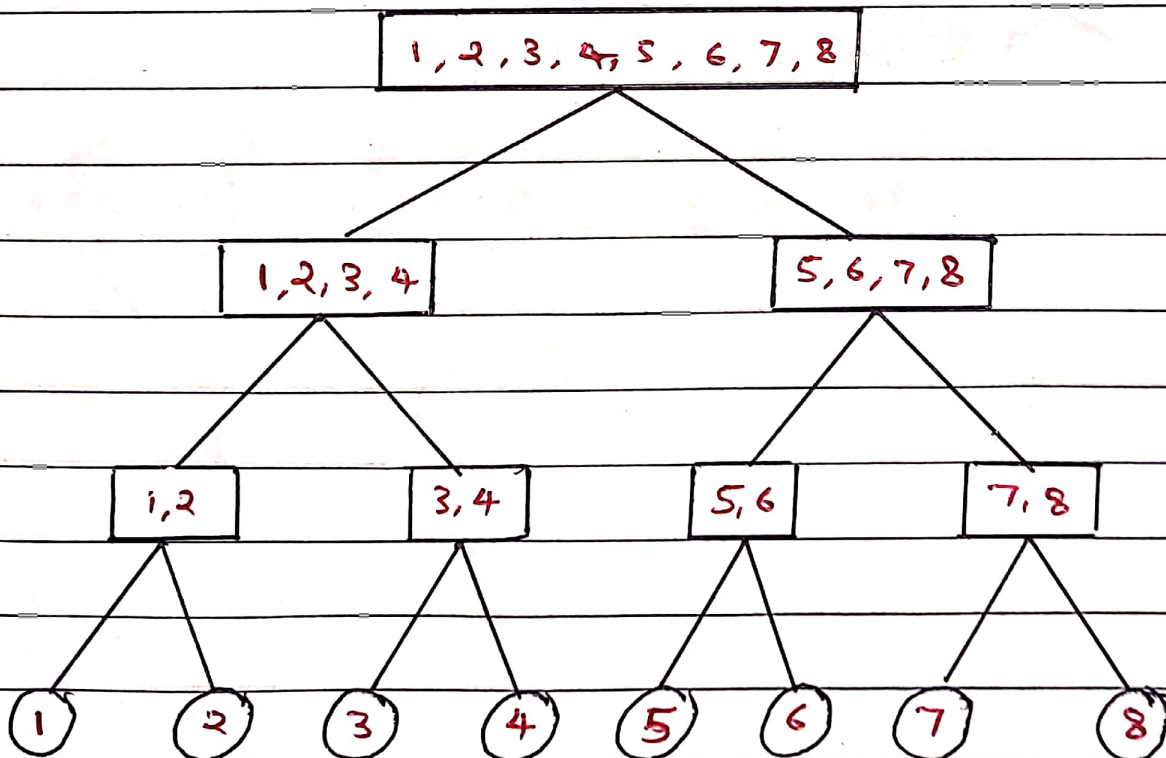
Step 1: Split Phase



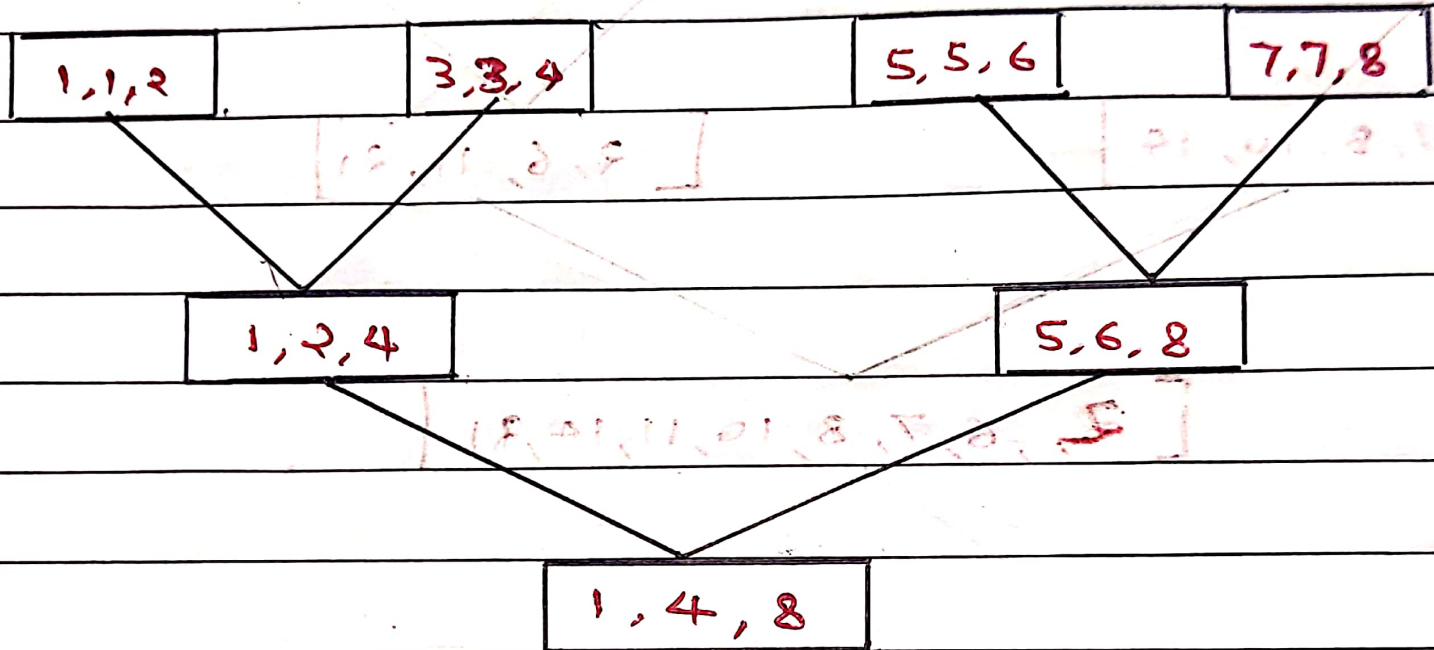
## Step 2: Merge Phase



## Step 3: Split Tree



# Step 4: Merge Tree





Q. Sort the array using Merge sort also, draw split tree and merge tree for the same.

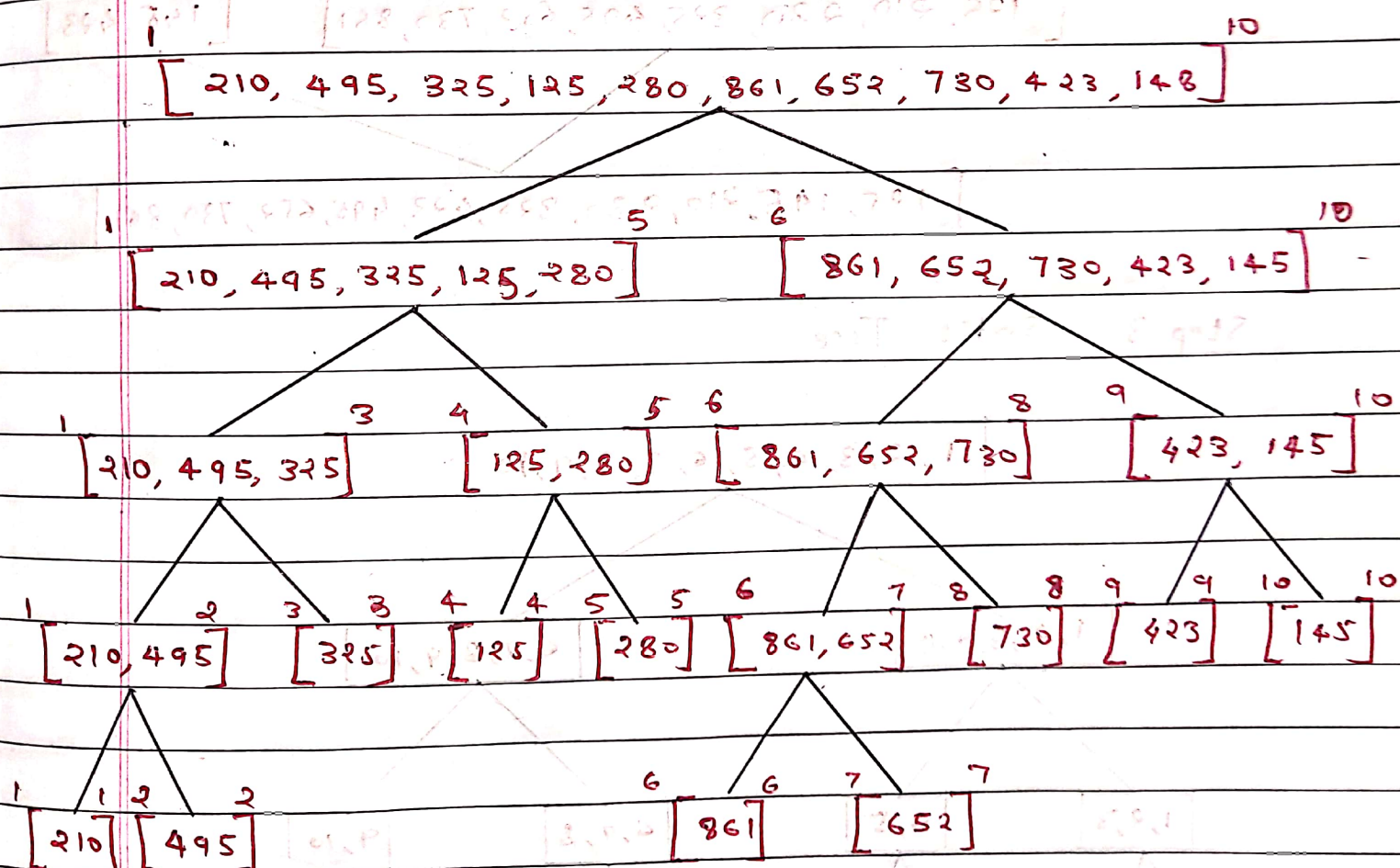
210, 495, 325, 125, 280, 861, 652, 730, 423, 148

Sol<sup>n</sup>:

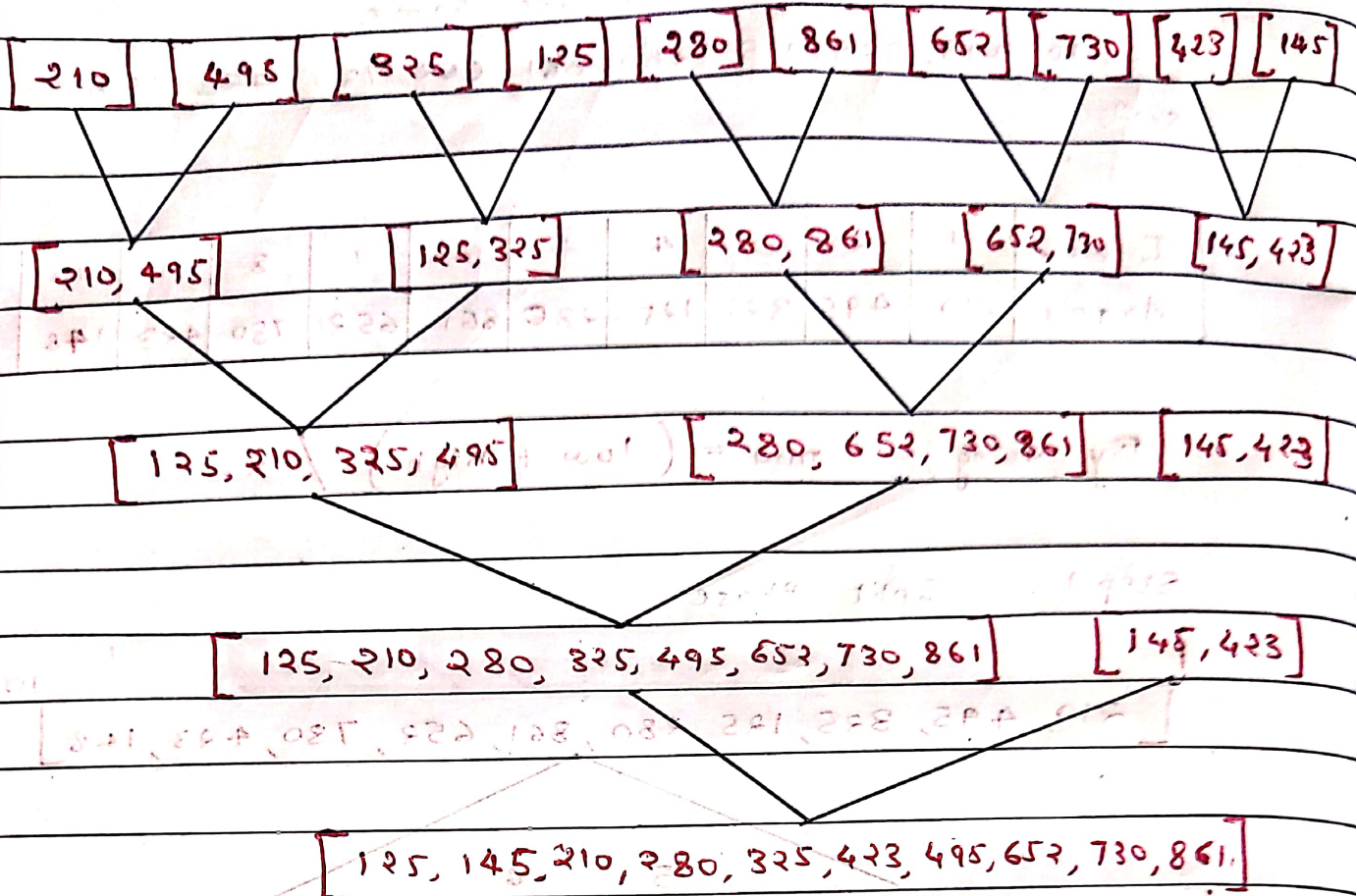
Index	1	2	3	4	5	6	7	8	9	10
Array	210	495	325	125	280	861	652	730	423	148

By using,  $mid = (low + high) / 2$

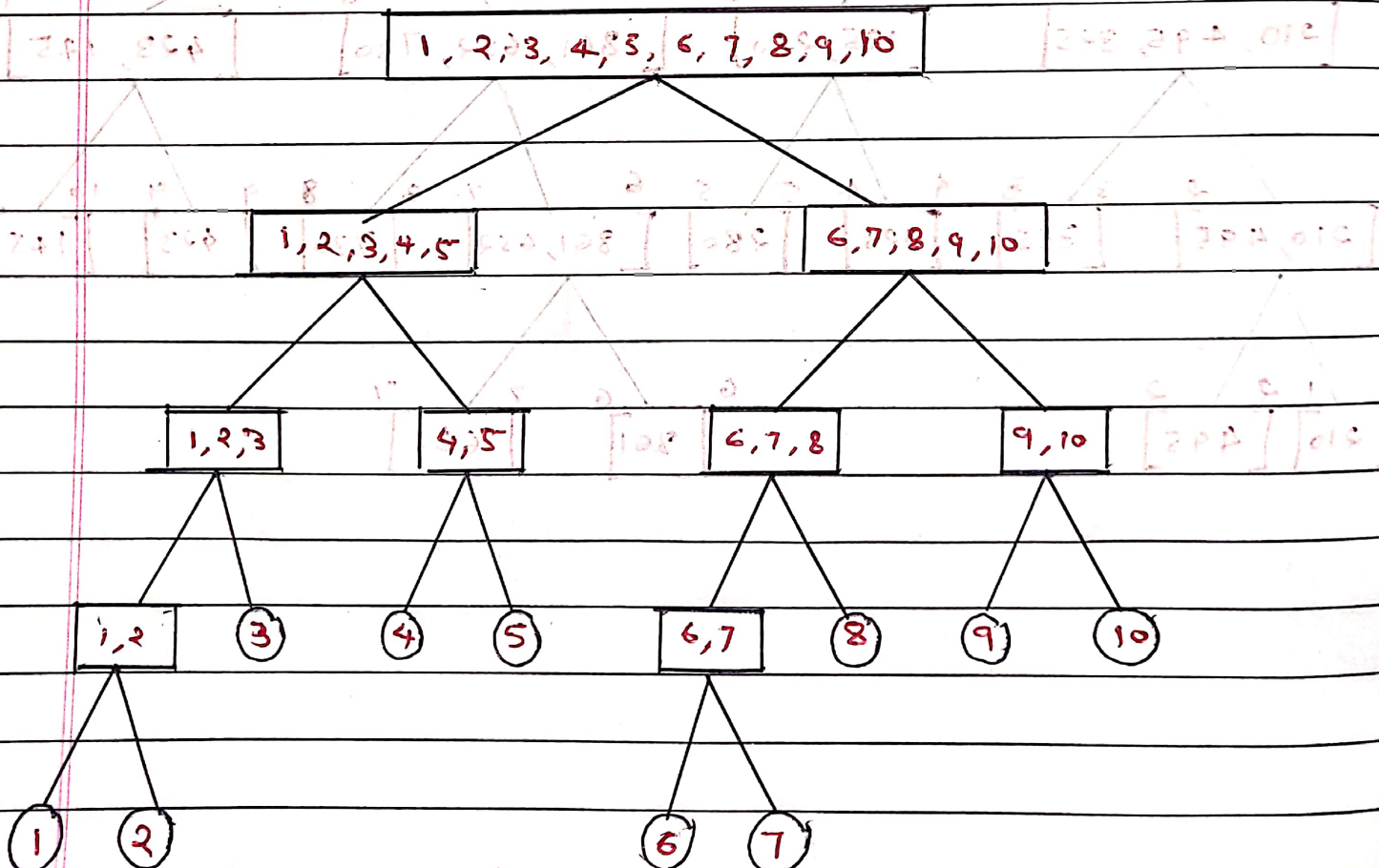
Step 1: Split Phase



## Step 2: Merge Phase



## Step 3: Split Tree





#### Step 4: Merge Tree

