2) (10 pts) ALG (Sorting)

Consider tracing through a Merge Sort of the array below. In the process of the code running, 10 merge operations occur. Assume that when a subarray of odd size gets split into two arrays for recursive calls, the left array is smaller than the right. (So, when the very first recursive call occurs, it will call the subarray storing the five leftmost elements.) **Show the contents of the whole array RIGHT AFTER each of the 10 merge operations occurs.** Please show your result in the order that the Merge operations occur. Note: Please think carefully about the actual order each Merge operation occurs. **PLEASE FILL IN ALL SLOTS EVEN IF THEY DON'T CHANGE BETWEEN ITERATIONS!!!** (1 pt is awarded for every row that is 100% perfect, plus one bonus point for getting all of the rows.)

Index	0	1	2	3	4	5	6	7	8	9	10
Orig	13	18	19	11	2	7	4	15	6	12	1
1st Merge	13	18	19	11	2	7	4	15	6	12	1
2nd Merge	13	18	19	2	11	7	4	15	6	12	1
3rd Merge	13	18	2	11	19	7	4	15	6	12	1
4th Merge	2	11	13	18	19	7	4	15	6	12	1
5th Merge	2	11	13	18	19	7	4	15	6	12	1
6th Merge	2	11	13	18	19	4	7	15	6	12	1
7th Merge	2	11	13	18	19	4	7	15	6	1	12
8th Merge	2	11	13	18	19	4	7	15	1	6	12
9th Merge	2	11	13	18	19	1	4	6	7	12	15
10th Merge	1	2	4	6	7	11	12	13	15	18	19

Grading: 1 pt per row, row has to be completely correct to get the point. Give the last (10th) point if all 9 rows are correct. (Possible scores are 0,1,2,3,4,5,6,7,8 and 10.)