5) (10 pts) ALG (Sorting)

(a) (4 pts) Consider sorting the array below in ascending order using Bubble Sort. Show the contents of the array after each iteration of the outer loop.

Original	6	12	1	9	4	2
1st iteration						
2nd iteration						
3rd iteration						
4th iteration						
5th iteration						

(b) (6 pts) Please provide the best case and worst case run times (Big-O) for each of the following three sorting algorithms, in terms of n, the number of elements being sorted.

Sort	Best Case	Worst Case
Merge Sort		
Quick Sort		
Insertion Sort		