

Name: Abdelaziz Salah Mohamed Abdo

Sec: 2, **BN:** 3

Sorting method	Its name	Reason
Merge Sort	Zeta	Because the number of movements in this method is always constant regardless the way of sorted items; this is because it always creates a new array and start to store the sorted data inside it.
Selection Sort	Theta	Because it has constant number of comparisons regardless the way of sorting; this is because it always starts from the beginning which is least sorted element index + 1
Insertion Sort	Alpha	It has n comparisons and no movements in the best case when the items are inserted sorted; this is because when they're sorted it just move on them and compare each element with the element before it and it finds that the condition of comparisons is true
Quick Sort	Epsilon	It takes large number of comparisons and n movements in the worst case when the items are already sorted; this is because that the pivot is always at the end of the divided array so the ptr moves on the whole n without finding any element less than that of the pivot so it doesn't swap any till reaching the end
Heap Sort	Gamma	The last remaining one