d.) For the Insertion Sort graph it performed $O(n^2)$
For the Merge Sort graph it performed O(nlogn)
For the Quick Sort graph it performed $O(n^2)$

Insertion and Quicksort had the same graph but the only difference was Insertion sort ran longer than Quicksort. As for Merge Sort this ran the fastest out of all the algorithms implemented.

Looking at these graphs while knowing the size of the array and the running time of the algorithm. I can conclude that that asymptotic running time is a good indicator of the actual performance of the algorithm. If you know the size of the array in respect to the running time it would be a good indicator because, for example, insertion and quick sort peformed $O(n^2)$. But insertion ran slower than quick sort.