Based on all sorts gathered the graph shows bubble and insertion sort taking the longest to perform, with bubble sort being the slowest likely because of its worst-case scenario of O(n^2). In addition, the four other sort (MergeSort, IterativeMergeSort, ShellSort, QuickSort) appear to perform very similar timing, with QuickSort being the fastest overall. While the slowest out of the four is MergeSort.

**BubbleSort:**

Best Case: O(n)

Average: O(n^2)

Worst: O(n^2)

**InsertionSort:**

Best Case: O(n)

Average: O(n^2)

Worst: O(n^2)

**MergeSort:**

Best case: O(n log n)

Average: O(n log n)

Worst: O(n log n)

**IterativeMergeSort:**

Best case: O(n log n)

Average: O(n log n)

Worst: O(n log n)

**QuickSort:**

Best Case: O(n log n)

Average: O(n log n)

Worst: O(n^2

**ShellSort:**

Best Case: O(n log n)

Average: depends on gap sequence

Worst Case: O(n^2)