**Bubble Sort Best Time Complexity**

A graph with a line

Description automatically generated

Sort Algorithm: bubbleSort Sort

Scenario: Best Case

Array Size: 100

Time Taken: 0.00001470 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Best Case

Array Size: 1000

Time Taken: 0.00007290 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Best Case

Array Size: 10000

Time Taken: 0.00067410 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Best Case

Array Size: 100000

Time Taken: 0.00413030 seconds

**Bubble Sort Average Time Complexity**

A graph with a red line

Description automatically generated

Sort Algorithm: bubbleSort Sort

Scenario: Average Case

Array Size: 100

Time Taken: 0.00000000 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Average Case

Array Size: 1000

Time Taken: 0.03099585 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Average Case

Array Size: 10000

Time Taken: 3.67103577 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Average Case

Array Size: 100000

Time Taken: 441.88322949 seconds

**Bubble Sort Worst Time Complexity**

**A graph with a red line

Description automatically generated**

Sort Algorithm: bubbleSort Sort

Scenario: Worst Case

Array Size: 100

Time Taken: 0.00053990 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Worst Case

Array Size: 1000

Time Taken: 0.05067050 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Worst Case

Array Size: 10000

Time Taken: 4.70652870 seconds

Sort Algorithm: bubbleSort Sort

Scenario: Worst Case

Array Size: 100000

Time Taken: 472.54767480 seconds

**Merge Sort Best Time Complexity**

**A graph with a line going up

Description automatically generated**

Sort Algorithm: mergeSort Sort

Scenario: Best Case

Array Size: 100

Time Taken: 0.00017090 seconds

Sort Algorithm: mergeSort Sort

Scenario: Best Case

Array Size: 1000

Time Taken: 0.00165400 seconds

Sort Algorithm: mergeSort Sort

Scenario: Best Case

Array Size: 10000

Time Taken: 0.01198780 seconds

Sort Algorithm: mergeSort Sort

Scenario: Best Case

Array Size: 100000

Time Taken: 0.11020630 seconds

**Merge Sort Average Time Complexity**

**A graph with a red line

Description automatically generated**

Sort Algorithm: mergeSort Sort

Scenario: Average Case

Array Size: 100

Time Taken: 0.00000000 seconds

Sort Algorithm: mergeSort Sort

Scenario: Average Case

Array Size: 1000

Time Taken: 0.00300002 seconds

Sort Algorithm: mergeSort Sort

Scenario: Average Case

Array Size: 10000

Time Taken: 0.02199912 seconds

Sort Algorithm: mergeSort Sort

Scenario: Average Case

Array Size: 100000

Time Taken: 0.20298648 seconds

**Merge Sort Worst Time Complexity**

A graph with a red line

Description automatically generated Sort Algorithm: mergeSort Sort

Scenario: Worst Case

Array Size: 100

Time Taken: 0.00018330 seconds

Sort Algorithm: mergeSort Sort

Scenario: Worst Case

Array Size: 1000

Time Taken: 0.00146910 seconds

Sort Algorithm: mergeSort Sort

Scenario: Worst Case

Array Size: 10000

Time Taken: 0.01162860 seconds

Sort Algorithm: mergeSort Sort

Scenario: Worst Case

Array Size: 100000

Time Taken: 0.16296030 seconds

**Quick Sort Best Time Complexity**

**A graph with a line drawn on it

Description automatically generated**

Sort Algorithm: quickSort Sort

Scenario: Best Case

Array Size: 100

Time Taken: 0.00020450 seconds

Sort Algorithm: quickSort Sort

Scenario: Best Case

Array Size: 1000

Time Taken: 0.00237470 seconds

Sort Algorithm: quickSort Sort

Scenario: Best Case

Array Size: 10000

Time Taken: 0.01197430 seconds

Sort Algorithm: quickSort Sort

Scenario: Best Case

Array Size: 100000

Time Taken: 0.16403330 seconds

**Quick Sort Average Time Complexity**

**A graph with a red line

Description automatically generated**

Sort Algorithm: quickSort Sort

Scenario: Average Case

Array Size: 100

Time Taken: 0.00099707 seconds

Sort Algorithm: quickSort Sort

Scenario: Average Case

Array Size: 1000

Time Taken: 0.00200081 seconds

Sort Algorithm: quickSort Sort

Scenario: Average Case

Array Size: 10000

Time Taken: 0.07197905 seconds

Sort Algorithm: quickSort Sort

Scenario: Average Case

Array Size: 100000

Time Taken: 0.38985062 seconds

**Quick Sort Worst Time Complexity**

**A graph with a red line

Description automatically generated**

Sort Algorithm: quickSort Sort

Scenario: Worst Case

Array Size: 100

Time Taken: 0.00078930 seconds

Sort Algorithm: quickSort Sort

Scenario: Worst Case

Array Size: 1000

Time Taken: 0.02536750 seconds

Sort Algorithm: quickSort Sort

Scenario: Worst Case

Array Size: 10000

Time Taken: 2.67927660 seconds

Sort Algorithm: quickSort Sort

Scenario: Worst Case

Array Size: 100000

Time Taken: 251.54848070 seconds

**Insertion Sort Best Time Complexity**

**A graph with a line

Description automatically generated**

Sort Algorithm: insertionSort Sort

Scenario: Best Case

Array Size: 100

Time Taken: 0.00002130 seconds

Sort Algorithm: insertionSort Sort

Scenario: Best Case

Array Size: 1000

Time Taken: 0.00013150 seconds

Sort Algorithm: insertionSort Sort

Scenario: Best Case

Array Size: 10000

Time Taken: 0.00067010 seconds

Sort Algorithm: insertionSort Sort

Scenario: Best Case

Array Size: 100000

Time Taken: 0.00841840 seconds

**Insertion Sort Average Time Complexity**

**A graph with a red line

Description automatically generated**

Sort Algorithm: insertionSort Sort

Scenario: Average Case

Array Size: 100

Time Taken: 0.00000000 seconds

Sort Algorithm: insertionSort Sort

Scenario: Average Case

Array Size: 1000

Time Taken: 0.01497555 seconds

Sort Algorithm: insertionSort Sort

Scenario: Average Case

Array Size: 10000

Time Taken: 1.62276173 seconds

Sort Algorithm: insertionSort Sort

Scenario: Average Case

Array Size: 100000

Time Taken: 354.48626161 seconds

**Insertion Sort Worst Time Complexity**

**A graph with a red line

Description automatically generated**

Sort Algorithm: insertionSort Sort

Scenario: Worst Case

Array Size: 100

Time Taken: 0.00033660 seconds

Sort Algorithm: insertionSort Sort

Scenario: Worst Case

Array Size: 1000

Time Taken: 0.02892970 seconds

Sort Algorithm: insertionSort Sort

Scenario: Worst Case

Array Size: 10000

Time Taken: 2.84078630 seconds

Sort Algorithm: insertionSort Sort

Scenario: Worst Case

Array Size: 100000

Time Taken: 294.27693260 seconds