

| Algorithm | Time Complexity | | |
|-----------------------|-------------------|-------------------|----------------------------------|
| | Best | Average | Worst |
| Tim Sort | $O(n)$ | $O(n \log n)$ | $O(n \log n)$ |
| Intro Sort | $O(n \log n)$ | $O(n \log n)$ | $O(n \log n)$ |
| Quick Sort | $O(n \log n)$ | $O(n \log n)$ | $O(n^2)$ |
| Merge Sort | $O(n \log n)$ | $O(n \log n)$ | $O(n \log n)$ |
| Heap Sort | $O(n \log n)$ | $O(n \log n)$ | $O(n \log n)$ |
| Tree Sort | $O(n \log n)$ | $O(n \log n)$ | $O(n^2)$ |
| Shell Sort | $O(n \log n)$ | $O(n (\log n)^2)$ | $O(n (\log n)^2)$ |
| Bitonic Sort | $O(n (\log n)^2)$ | $O(n (\log n)^2)$ | $O(n (\log n)^2)$ |
| Counting Sort | $O(n + k)$ | $O(n + k)$ | $O(n + k)$ |
| Radix Sort | $O(nk)$ | $O(nk)$ | $O(nk)$ |
| Pigeonhole Sort | $O(n + r)$ | $O(n + r)$ | $O(n + r)$ |
| Insertion Sort | $O(n)$ | $O(n^2)$ | $O(n^2)$ |
| Bubble Sort | $O(n)$ | $O(n^2)$ | $O(n^2)$ |
| Strand Sort | $O(n)$ | $O(n^2)$ | $O(n^2)$ |
| Binary Insertion Sort | $O(n)$ | $O(n^2)$ | $O(n^2)$ |
| Comb Sort | ... | ... | $O(n^2)$ |
| Cocktail Sort | $O(n)$ | $O(n^2)$ | $O(n^2)$ |
| Gnome Sort | $O(n)$ | $O(n^2)$ | $O(n^2)$ |
| Selection Sort | $O(n^2)$ | $O(n^2)$ | $O(n^2)$ |
| Cycle Sort | ... | $O(n^2)$ | $O(n^2)$ |
| Bead (Gravity) Sort | ... | ... | ... |
| Odd Even Sort | $O(n^2)$ | $O(n^2)$ | $O(n^2)$ |
| Pancake Sort | $O(n^2)$ | $O(n^2)$ | $O(n^2)$ |
| Stooge Sort | $O(n^{2.7095})$ | $O(n^{2.7095})$ | $O(n^{2.7095})$ |
| Bogo Sort | $O(n)$ | $O(n n!)$ | $O(n n!) \rightarrow \text{INF}$ |