

Algorithm	Average Runtime	Worst-Case Runtime
Merge Sort	$\Theta(n \log n)$	$O(n \log n)$
Quick Sort	$O(n \log n)$	$O(n^2)$
Heap Sort	$O(n \log n)$	$O(n \log n)$
Bubble, Insertion, Selection Sort		$O(n^2)$
Dijkstra's Algorithm		$\Theta(E + V \log V)$
Floyd-Warshall Algorithm	$\Theta(V ^3)$	$\Theta(V ^3)$
Kruskal's Algorithm		$O(E \log V)$
Prim's Algorithm		$O(V ^2)$ or $O(E \log V)$ or $O(E + V \log V)$
Binary Search		$O(\log n)$
Breadth First Search		$O(E + V)$
Depth First Search		$O(E + V)$
Hash Table Insert, Search, Delete		$O(1)$
Naive Matrix Multiplication		$O(n^3)$
Strassen's Algorithm		$O(n^{\log_2 7}) \approx O(n^{2.81})$
Singular Value Decomposition		$O(mn^2)$, $m \geq n$
LU Decomposition		$O(n^3)$
Cholesky Decomposition		$O(n^3)$, around half of LU
Power Iteration		$O(kn^2)$ for k iterations