Run Time

▪ A logarithmic algorithm – O(logn)  
Runtime grows logarithmically in proportion to n.  
▪ A linear algorithm – O(n)  
Runtime grows directly in proportion to n.  
▪ A superlinear algorithm – O(nlogn)  
Runtime grows in proportion to n.  
▪ A polynomial algorithm – O(nc)  
Runtime grows quicker than previous all based on n.  
▪ A exponential algorithm – O(cn)  
Runtime grows even faster than polynomial algorithm based on n.  
▪ A factorial algorithm – O(n!)  
Runtime grows the fastest and becomes quickly unusable for even  
small values of

▪ Logarithmic algorithm – O(logn) – Binary Search.  
▪ Linear algorithm – O(n) – Linear Search.  
▪ Superlinear algorithm – O(nlogn) – Heap Sort, Merge Sort.  
▪ Polynomial algorithm – O(n^c) – Strassen’s Matrix Multiplication, Bubble Sort, Selection Sort, Insertion Sort, Bucket Sort.  
▪ Exponential algorithm – O(c^n) – Tower of Hanoi.  
▪ Factorial algorithm – O(n!) – Determinant Expansion by Minors, Brute force Search algorithm for Traveling Salesman Problem.