Graph Algorithms

1. Breadth First Search (BFS)
2. Depth First Search (DFS)
3. Shortest Path from source to all vertices **Dijkstra**
4. Shortest Path from every vertex to every other vertex **Floyd Warshall**
5. Minimum Spanning tree **Prim**
6. Minimum Spanning tree **Kruskal**
7. Topological Sort
8. Johnson's algorithm
9. Articulation Points (or Cut Vertices) in a Graph
10. Bridges in a graph

Dynamic Programming

1. Longest Common Subsequence
2. Longest Increasing Subsequence
3. Edit Distance
4. Minimum Partition
5. Ways to Cover a Distance
6. Longest Path In Matrix
7. Subset Sum Problem
8. Optimal Strategy for a Game
9. 0-1 Knapsack Problem
10. Assembly Line Scheduling

Searching And Sorting

1. Binary Search
2. Quick Sort
3. Merge Sort
4. Order Statistics
5. KMP algorithm
6. Rabin karp
7. Z's algorithm
8. Aho Corasick String Matching
9. Counting Sort
10. Manacher's algorithm: Part 1, Part 2 and Part 3

Number theory and Other Mathematical

Prime Numbers and Prime Factorization

1. Primality Test | Set 1 (Introduction and School Method)
2. Primality Test | Set 2 (Fermat Method)
3. Primality Test | Set 3 (Miller–Rabin)
4. Sieve of Eratosthenes
5. Segmented Sieve
6. Wilson's Theorem
7. Prime Factorisation
8. Pollard's rho algorithm

Modulo Arithmetic Algorithms

1. Basic and Extended Euclidean algorithms
2. Euler's Totient Function
3. Modular Exponentiation
4. Modular Multiplicative Inverse
5. Chinese remainder theorem Introduction

6. Chinese remainder theorem and Modulo Inverse Implementation
7. nCr%m and this.

Miscellaneous:

1. Counting Inversions
2. Counting Inversions using BIT
3. logarithmic exponentiation
4. Square root of an integer
5. Heavy light Decomposition , this and this
6. Matrix Rank
7. Gaussian Elimination to Solve Linear Equations
8. Hungarian algorithm
9. Link cut
10. Mo's algorithm and this
11. Factorial of a large number in C++
12. Factorial of a large number in Java+
13. Russian Peasant Multiplication
14. Catalan Number

Geometrical and Network Flow Algorithms

1. Convex Hull
2. Graham Scan
3. Line Intersection
4. Interval Tree
5. Matrix Exponentiation and this
6. Maxflow Ford Furkerson Algo and Edmond Karp Implementation
7. Min cut
8. Stable Marriage Problem
9. Hopcroft–Karp Algorithm for Maximum Matching
10. Dinic's algo and e-maxx

Data Structures

1. Binary Indexed Tree or Fenwick tree
2. Segment Tree (RMQ, Range Sum and Lazy Propagation)
3. K-D tree (See insert, minimum and delete)
4. Union Find Disjoint Set (Cycle Detection and By Rank and Path Compression)
5. Tries
6. Suffix array (this, this and this)
7. Sparse table
8. Suffix automata
9. Suffix automata II
10. LCA and RMQ

Ref: https://www.geeksforgeeks.org/top-algorithms-and-data-structures-for-competitive-programming/