**Number Theory:**

1. Don't Know Anything
2. Binary Exponentiation
3. Modular Inverse
4. sieve of eratosthenes
5. extended euclid
6. Lucas Theorem
7. Phi Function
8. Mobius Function
9. Chinese Remainder Theorem
10. Linear Diophantine Equation for two variable
11. Linear Sieve for multiplicative function
12. Pollard Rho
13. Primitive root
14. Discrete Log / Discrete Root
15. Mobius Inversion
16. Dirichlet convolution

**Geometry**

1. Don't Know Anything
2. Basics (2d point, complex numbers, vector, Translation, Scaling, Rotation, Dot, Cross Product)
3. Lines (projection, refrection, intersection)
4. Segments (point on segment, point segment distance, segment segment intersection, segment segment distance)
5. Polygon (area, point in polygon)
6. Circle (point in circle, tangent)
7. 3d geometry (point, plane, line)
8. Convex Hull
9. Picks Theorem
10. Convex polygon algorithms with binary search
11. Rotating Calipers
12. Minkowski sum and Algebric Geometry
13. Half Plane intersection

**Graph**

1. Don't Know Anything
2. DFS / BFS
3. 0 - 1 BFS
4. Lowest Common Ancestor
5. Strongly Connected Component
6. Rerooting Trick
7. Articulation Point and Bridge
8. Prims + Krushkal MST
9. Dijkstra
10. Bellman Ford
11. Floyd Warshall
12. Shortest Path Faster Algorithm
13. Cycle Detection
14. 2 SAT
15. Maximum Clique
16. Dial's Algorithm
17. LCA in O(1)
18. Boruvka's Algorithm
19. Block Cut tree
20. Maximum matching in bipartite Graph
21. Maximum matching in general Graph
22. Maximum Flow(Dinic)
23. Min Cost max flow
24. L-R Flow

**Data Structure**

1. Don't Know Anything
2. Segment Tree
3. Segment Tree Lazy Propagation
4. Persistent Segment Tree
5. Dynamic Segment Tree
6. Merge Sort Tree
7. Wavelet Tree
8. Sparse Table
9. BIT
10. MOs Algorithm
11. Trie
12. DSU
13. SQRT Decomposition
14. Centroid Decomposition
15. Rope
16. Monotonus Queue
17. Ordered Set
18. MOs on Tree
19. HLD
20. Treap
21. KD Tree
22. Segment Tree Beats

**Dynamic Programming**

1. Don't Know Anything
2. Coin Change DP
3. Knapsack DP
4. LIS
5. Digit DP
6. Bitmask DP
7. DP optimization
8. DP optimization: Divide and conquer
9. DP optimization: Knuth
10. SOS DP
11. Bounded Knapsack
12. Slope Trick
13. Convex Hull Trick
14. Dynamic Convex Hull Trick
15. Li Chao Tree
16. Broken Profile DP / Plug DP
17. DP optimization: Alien Trick

**String Algorithm**

1. Don't Know Anything
2. KMP / Z algorithm
3. Aho Corasick
4. Suffix Array
5. Suffix Automaton
6. Palindromic Tree
7. Manachers Algorithm
8. String Hashing

**Miscelleneous**

1. Don't Know Anything
2. Matrix Exponentiation
3. Grundy Number
4. Two Pointers
5. Binary Search
6. Ternary Search
7. Balanced Bracket Sequence
8. Expected Value
9. FFT
10. Gaussian Elemination
11. NTT
12. Basis Vector
13. Parallel Binary Search
14. FWHT
15. Lagrange Interpolation
16. Berlekamp Massey