DSA DSA C	Level 2 Level 3 Competitive	~ ^
	Text Processing   ♦ Shortest Palindrome  ♦ Kmp Pattern Searching  ♦ Z Algorithm For Pattern Searching  ♦ Z Algorithm For Pattern Searching  ♦ Kmp Pattern Searching	^
	♦ Find String Roots ♦ Manacher's Algorithm ♦ String Rotation ♦ Prefix And Suffix Count	
	<ul> <li>♦ Prefix And Suffix Count</li> <li>♦ Say No To Palindrome</li> <li>♦ Coin Rows</li> <li>♦ String Polynomial Hashing</li> <li>♦ Diane</li> </ul>	
	♦ Rabin Karp Pattern Find (spoj) ♦ Password ♦ Good Substrings Longest Duplicate Substring ♦ Longest Prefix Suffix	
	<ul> <li>♦ Longest Prefix Suffix</li> <li>♦ Lexicographical Suffixes</li> <li>♦ Longest Common Substring (2 Strings)</li> <li>♦ Repeated Substrings - Kattis</li> <li>♦ Longest Palindromic Substring</li> </ul>	
	<ul> <li>♦ Hidden Password - Icpc Regionals</li> <li>♦ Dfs In Suffix Tree</li> <li>♦ Suffix Tree - Application 1 - Pattern Find</li> <li>♦ Suffix Tree - Application 2 - Longest Repeated Substrings</li> <li>♦ Suffix Tree - Application 3 - Longest Common Substring</li> </ul>	
	♦ Suffix Tree - Dictionary Queries ♦ Aho Corasick - Application ♦ Obscene Words Filter ♦ Vitaly And Strings	
	♦ Remove Adjacent ♦ Phoenix And Distribution ♦ Make Palindrome ♦ Wizards And Minimal Spell ♦ Exponential Notation	
	♦ Obtain The String ♦ One More Name ♦ Ab-string ♦ Print 1337 String ♦ String Reversal	
<u></u>	♦ Substring Problem Range Queries ♦ Range Addition ♦ Moksh And His Girlfriend	^
	<ul> <li>♦ Square Root Decomposition</li> <li>♦ Point Update In Square Root Decomposition</li> <li>♦ Fenwick Tree</li> <li>♦ 2d Binary Indexed Tree</li> <li>♦ Create Sorted Array Through Instructions</li> </ul>	
C		^
	<ul> <li>✓ Linear Diophantine Equation</li> <li>✓ Eulers Totient Function</li> <li>✓ Wilsons Theorem</li> <li>✓ Modular Fast Exponentiation</li> <li>✓ Modular C(n,r)</li> </ul>	
	♦ No Max No Min ♦ Prime Factors Using Sieve ♦ All Factors Using Sieve ♦ Count Of Common Divisors ♦ Gcd Length	
	♦ I Hate IIII ♦ Relatively Prime Pairs ♦ Sum Of Factors ♦ Chinese Remainder Theorem	
C	<ul> <li>♦ Monkey Tradition</li> <li>Came Theory</li> <li>♦ One Two Three Game</li> <li>♦ Nim Game</li> <li>♦ Buddy Nim</li> </ul>	^
	<ul> <li>♦ First Move In A Nim Game</li> <li>♦ A Modified Game Of Nim</li> <li>♦ Winner In Nim Game</li> <li>♦ Number Game</li> </ul>	
	♦ Alice And Bob Permutation Game Circle Game Madmax	
	<ul> <li>♦ Palindrome Game (easy Version)</li> <li>♦ Palindrome Game (hard Version)</li> <li>♦ Grundy Number</li> <li>♦ Deleting Divisors</li> <li>♦ Two Pile With Grundy Number</li> </ul>	
C	Binary Lifting  \$\sqrt{\text{K'th Ancestor}}\$  \$\sqrt{\text{Lca - Lowest Common Ancestor}}\$  \$\sqrt{\text{Cats And Tree}}\$	^
C	♦ Learning Dishes ♦ Longest Good Segment ♦ Tree And Extra Edge Interactive problems ♦ Lost Tree	^
	♦ Manhattan Rectangle ♦ Bear And Prime 100 ♦ Flamingoes Of Mystery ♦ Chocolate Bunny	
	<ul> <li>♦ Lost Numbers</li> <li>♦ Guess The Array</li> <li>♦ Guessing The Greatest Version</li> <li>♦ Guess The Kth Zero</li> <li>♦ 3 Coloring</li> </ul>	
	♦ Rpd And Rap Sheet ♦ Strange Device ♦ Pick Heroes ♦ Kuroni And The Celebration ♦ Tree Diameter	
	♦ Take A Guess ♦ Nastia And A Hidden Permutation ♦ Rocket Dwarves, Hats And Extrasensory Abilities	
C	Ternary Search	^
	♦ Rescuer ♦ Race Time! ♦ Weakness And Poorness ♦ Closest Distance	
C	♦ Restorer Distance ♦ Trick Or Treat ♦ Devu And His Brother Euler Tour	^
	♦ Subtree Sum ♦ New Year Tree Lca - Lowest Common Ancestor - Euler Tour ♦ Count Descendants ♦ Path Sum	
C	Maths	^
	<ul> <li>         ⟨N-th Not Divisible By N         ⟨N Buying Shovels         ⟨N Pocket Book         ⟨N Product Of Three Numbers              ⟨N Product Of Three Numbers               ⟨N Product Of Three Numbers               ⟨N Product Of Three Numbers               ⟨N Product Of Three Numbers               ⟨N Product Of Three Numbers               ⟨N Product Of Three Numbers               ⟨N Product Of Three Numbers                 ⟨N Product Of Three</li></ul>	
	♦ Same Parity Summands ♦ Yet Another Array Restoration ♦ Jumps ♦ Almost All Divisors ♦ Points	
	♦ Mafia ♦ Taxes Easy Number Challenge ♦ Minimum Number Of Steps ♦ Sea Battle	
	♦ Permutations ♦ Nice Garland ♦ Domino ♦ Equal Rectangles	
	♦ Divisibility By Difference ♦ Sasha And Magnetic Machines ♦ Add To Neighbour And Remove ♦ Just Arrange The Icons	
	<ul> <li>♦ Array Product</li> <li>♦ Array Product</li> <li>♦ Array Product</li> <li>♦ Enlarge Gcd</li> <li>♦ Annoying Present</li> </ul>	
	♦ Rectangle Puzzle 2 ♦ Binary Numbers And Sum ♦ Guest From Past ♦ Pipelines ♦ Nezzar And Board	
	♦ Square-free Division (easy Version) ♦ Celex Update ♦ Hilbert's Hotel ♦ Orac And Lcm	
	<ul> <li>♦ Circle Of Monsters</li> <li>♦ Yet Another Counting Problem</li> <li>♦ Social Circles</li> <li>♦ Aquamoon And Chess</li> <li>♦ Position In Fraction</li> </ul>	
	♦ Repaintings ♦ Row Gcd ♦ About Bacteria ♦ Chef And Closure ♦ Remove One Element	
	<ul> <li>♦ Pythagorean Triples</li> <li>♦ Bus Video System</li> <li>♦ Two Hundred Twenty One</li> <li>♦ Obtain A Permutation</li> </ul>	
	<ul> <li>♦ Sequence Transformation</li> <li>♦ Board Game</li> <li>♦ Repaintings</li> <li>♦ Road To Post Office</li> <li>♦ Strange Function</li> </ul>	
	♦ Infinite Fence Infinite Prefixes Primes And Multiplication Laboratory Work Count The Arrays	
	Heavy Light Decomposition  \$\langle \text{Lca} - \text{HId} \text{\$\sqrt{Path Sum A To B}} \text{\$\sqrt{Paint Lasting Test}}\$	^
C	<ul> <li>♦ Point Location Test</li> <li>♦ Line Segment Intersection</li> <li>♦ Polygon Area</li> <li>♦ Point In Polygon</li> <li>Constructive algorithm</li> </ul>	^
	♦ Sorting Railway Cars Bear & Forgotten Tree 3 Sum In The Tree ♦ Walking Between Houses	
	♦ Alyona And Mex ♦ Marina And Vasya ♦ Messy Cows And Sequences ♦ Anya And Smartphone	
	♦ Plasticine Zebra ♦ Bits ♦ Heap Operations ♦ Slava And Tanks ♦ Polyline	
	♦ From Y To Y  ♦ Maximum Sum Of Products  ♦ Palindromic Matrix  ♦ Crazy Diamond	
	<ul> <li>♦ Reading Books</li> <li>♦ Another Problem About Dividing Numbers</li> <li>♦ Grid-00100</li> <li>♦ Ehab And Prefix Mexs</li> <li>♦ Even Picture</li> </ul>	
	<ul> <li>♦ Even Picture</li> <li>ata Structures</li> <li>J Segment Tree</li> <li>♦ Max In An Interval - Range Query</li> <li>♦ Sum Of Interval</li> </ul>	^
	<ul> <li>♦ Max In A Interval - Range Query Point Update</li> <li>♦ What's At Idx - Point Query Range Update</li> <li>♦ Sum Of Range - Range Query Range Update</li> <li>♦ Maximum Sum</li> </ul>	
	♦ Sum Of Squares ♦ 2d Segment Tree ♦ Toggle Bulbs ♦ Prime Divide ♦ Multiples Of 3	
	♦ K Increasing Subsequence 1   ♦ K Increasing Subsequence 2   ♦ Pillars   ♦ Domino Principle   ♦ Xor On Segment	
		^
	√> Total Palindromic Numbers   √> Who Will Win?   √> Do Not Repeat	