ff	Problem Code	Status	Count		Thinking Time(m)	Coding Time(m)	Time(m)	Total Time(m)		By yourself?	Category	1-2 line Comments about your approach is interesting?	Mostafa Category	Category Code	Level Quali
	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0			
					_		•					(last 4 columns)			
						•	, ,			orefer Topic					
		This sh	neet pag	e is anoth	er training	style. Deter	mine a cat	egory, go	ahead and	solve in ord	der. Read In	fo Page. Read end of this page.			
Vanya and Fence	CF677-D2-A							0				C++ Solution Example	adhoc, NA	1	0.5
Anton and Danik	<u>CF734-D2-A</u>							0				This is from Round 379. Here is the editorial	adhoc, NA	1	0.6
Petya and Strings	CF112-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1
s your horseshoe	CF228-D2-A							0				Video Solution - Eng Ahmead Raafat (Python)	adhoc, NA	1	1
Team	CF231-D2-A							0				Video Solution - Eng Youssef Ali	adhoc, NA	1	1
Boy or Girl	CF236-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1
Beautiful Matrix	CF263-D2-A							0				Video Solution - Eng Samed Hajajla	adhoc, NA	1	1
Colorful Stones (Si	CF265-D2-A							0				Video Solution - Eng Ahmead Raafat (Python)	adhoc, NA	1	1
Stones on the Tabl	CF266-D2-A							0				Video Solution - Eng Ahmead Raafat (Python)	adhoc, NA	1	1
	CF268-D2-A							0				Video Solution - Eng Yahia Ashraf	adhoc, NA	1	1
Word Capitalization								0				Video Solution - Solver to be (Java)	adhoc, NA	1	1
	CF344-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1
Sereja and Dima								0				Video Solution - Solver to be (Java)	adhoc, NA	1	1
-	CF405-D2-A							0				Video Solution - Eng John Gamal	adhoc, NA	1	1
	CF427-D2-A							0				Video Solution - Eng Ahmead Raafat (Python)	adhoc, NA	1	1
	CF431-D2-A							0				Video Solution - Eng Ahmead Raafat (Python)	adhoc, NA	1	1
	CF59-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1
								0				Video Solution - Solver to be (Java)  Video Solution - Eng Yahia Ashraf		1	1
Night at the Museu												· · · · · · · · · · · · · · · · · · ·	adhoc, NA		•
•	CF732-D2-A							0				Video Solution - Eng Yahia Ashraf	adhoc, NA	1	1
Bear and Big Broth								0				Video Solution - Eng Youssef El Ghareeb	adhoc, NA	1	1
	CF365-D2-A							0				Video Solution - Eng Muntaser Abukadeja	adhoc	1	1.5
	CF298-D2-A							0				Video Solution - Dr Mostafa Saad	adhoc	1	1.5
	CF118-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
Presents Presents	CF136-D2-A							0				Video Solution - Eng Ahmed Rafaat (Python)	adhoc, NA	1	1.5
Next Round	CF158-D12-A							0				<u>Video Solution - Solver to be (Java)</u>	adhoc, NA	1	1.5
Twins	CF160-D2-A							0				<u>Video Solution - Solver to be (Java)</u>	adhoc, NA	1	1.5
Dubstep	CF208-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
Mountain Scenery	<u>CF218-D2-A</u>							0				Video Solution - Eng John Gamal	adhoc, NA	1	1.5
Dice Tower	CF225-D2-A							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	1.5
Fancy Fence	CF270-D2-A							0				Video Solution - Eng Omar Ashraf	adhoc, NA	1	1.5
Bit++	CF282-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
Q Test	CF287-D2-A							0				Video Solution - Dr Mostafa Saad	adhoc, NA	1	1.5
Polo the Penguin a	CF289-D2-A							0				Video Solution - Dr Mostafa Saad	adhoc, NA	1	1.5
Shaass and Oskol	CF294-D2-A							0				Video Solution - Dr Mostafa Saad	adhoc, NA	1	1.5
Yaroslav and Perm								0				Video Solution - Dr Mostafa Saad	adhoc, NA	1	1.5
	CF318-D2-A							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	1.5
	CF339-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
Senia and Pan So								0				Video Solution - Eng Samed Hajajla	adhoc, NA	1	1.5
	CF41-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
	CF43-D2-A							0				Video Solution - Eng Belal Abdulnasser (Pythol		1	1.5
Anton and Letters								0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
	CF443-D2-A CF456-D2-A							0				Video Solution - Solver to be (Java)  Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
								0							
Wanna Be the Gu												Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
•	CF474-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
Counterexample								0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
Calculating Function								0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5
Team Olympiad	CF490-D2-A							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	1.5

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
Chewbacca and N	CF514-D2-A							0				<u>Video Solution - Eng Muntaser Abukadeja</u>	adhoc, NA	1	1.5	
Pangram	CF520-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Case of the Zeros	CF556-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Lineland Mail	CF567-D2-A							0				Video Solution - Eng Ahmed Rafaat (Python)	adhoc, NA	1	1.5	
Raising Bacteria	<u>CF579-D2-A</u>							0				Video Solution - Eng Ahmed Rafaat (Python)	adhoc, NA	1	1.5	
Olesya and Rodio	r <u>CF584-D2-A</u>							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Alyona and Number	CF682-D2-A							0				Video Solution - Eng John Gamal	adhoc, NA	1	1.5	
Free Ice Cream	CF686-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Young Physicist	CF69-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Launch of Collider	CF699-D2-A							0				Video Solution - Eng Samed Hajajla	adhoc, NA	1	1.5	
Brain's Photos	CF707-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Way Too Long Wo	CF71-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Arpa's hard exam	CF742-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Mahmoud and Lor	CF766-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Snacktower	CF767-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Oath of the Night's	CF768-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
New Password	CF770-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Carrot Cakes	CF799-D2-A							0				Video Solution - Solver to be (Java)	adhoc. NA	1	1.5	
Panoramix's Predi								0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Is it rated?	CF807-D2-A							0				Video Solution - Solver to be (Java)	adhoc, NA	1	1.5	
Die Roll	CF9-D2-A							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	1.5	
Electricity	UVA 12148							0				Learn Calender Leap Year	adhoc, calender, leap year	1	2	p1
•	TIMUS 1100							0				Stable sort exercise	adhoc, stable sort	1	2	p1
President's Office								0				Video Solution - Eng Muntaser Abukadeja	adhoc, stl	1	2	Ρ.
Sum of Digits	CF102-D2-B							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
Meeting	CF144-D2-B							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
Steps	CF152-D2-B							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
Burglar and Match								0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
Growing Mushroon								0				Video Solution - Eng Mohamed Salah	adhoc, NA	1	2	
Olympic Medal	CF215-D2-B							0				Video Solution - Eng Ahmed Salah	adhoc, NA	1	2	
Effective Approach								0				Video Solution - Eng Abanob Ashraf	adhoc, NA	1	2	
Roma and Changi								0				Video Solution - Eng Mohamed Salah	adhoc, NA	1	2	
Routine Problem								0						1	2	
	CF357-D2-B CF352-D2-B							0				Video Solution - Eng Mohamed Adel  Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
								0				•	adhoc, NA	1	2	
I.O.U.	CF376-D2-B							0				Video Solution - Eng Abanob Ashraf	adhoc, NA	1	2	
Multitasking	CF384-D2-B							0				Video Colodina Frankland Colod	adhoc, NA	1	2	
Bear and Strings								0				Video Solution - Eng Mohamed Salah	adhoc, NA	1		
Inna and New Mat												Video Solution - Eng Mohamed Salah	adhoc, NA		2	
Mashmokh and To								0				Video Solution - Eng Salma Yehia	adhoc, NA	1	2	
Pasha Maximizes								0				Video Solution - Eng Hossam Yehia	adhoc, NA	1	2	
DZY Loves Chemi								0				Video Solution - Eng Hussein Hesham	adhoc, NA	1	2	
	<u>CF448-D2-B</u>							0				Video Solution - Eng Mohamed Salah	adhoc, NA	1	2	
Chat Online	<u>CF469-D2-B</u>							0				Video Solution - Eng Mohamed Adel	adhoc, NA	1	2	
Coins	<u>CF47-D2-B</u>							0				Video Solution - Eng Samed Hajajla	adhoc, NA	1	2	
OR in Matrix	<u>CF486-D2-B</u>							0					adhoc, NA	1	2	
Vasya and Wrestlin								0					adhoc, NA	1	2	
Secret Combination								0					adhoc, NA	1	2	
Mr. Kitayuta's Colo	CF505-D2-B							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
Fox And Two Dots	CF510-D2-B							0				Video Solution - Eng Mohamed Adel	adhoc, NA	1	2	
Pasha and String	<u>CF525-D2-B</u>							0				Video Solution - Eng Hossam Yehia	adhoc, NA	1	2	
Sea and Islands	CF544-D2-B							0				Video Solution - Eng Mohamed Salah	adhoc, NA	1	2	

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
Kefa and Company	CF580-D2-B							0				Video Solution - SolverToBe (Java)	adhoc, NA	1	2	
Kolya and Tanya	<u>CF584-D2-B</u>							0				Video Solution - Eng Yahia Ashraf	adhoc, NA	1	2	
Approximating a C	CF602-D2-B							0					adhoc, NA	1	2	
Hamming Distance	CF608-D2-B							0					adhoc, NA	1	2	
Petya and Country	<u>CF66-D2-B</u>							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
Bear and Finding (	CF680-D2-B							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
Filya and Homewo	<u>CF714-D2-B</u>							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	
Complete the Work	CF716-D2-B							0				Video Solution - Eng Mohamed Salah	adhoc, NA	1	2	
Easter Eggs	CF78-D2-B							0				Video Solution - Eng Abanob Ashraf	adhoc, NA	1	2	
Hopscotch	CF141-D2-B							0					adhoc, NA	1	2	
Physics Practical	CF253-D2-B							0				Video Solution - Eng Mohamed Salah	adhoc, NA	1	2	
Little Girl and Gam	CF276-D2-B							0				Video Solution - Eng Hossam Yehia	adhoc, NA	1	2	
Painting Eggs	CF282-D2-B							0					adhoc, NA	1	2	
Fence	CF363-D2-B							0				Video Solution - Eng Muntaser Abukadeja	adhock, prefix sum	1	2	
Valera and Contes	CF369-D2-B							0				Video Solution - Eng Yahia Ashraf	adhoc, NA	1	2	
Han Solo and Laze	CF514-D2-B							0					adhoc, NA	1	2	
Two Buttons	CF520-D2-B							0				Video Solution - Solver to be (Java)	adhoc, NA	1	2	
Tavas and SaDDa	CF535-D2-B							0				Video Solution - Eng Abanob Ashraf	adhoc, NA	1	2	
Preparing Olympia								0				Video Solution - SolverToBe (Java)	adhoc, NA	1	2	
Lovely Palindrome								0				Video Solution - Solver to be (Java)	adhoc, NA	1	2	
Anatoly and Cockr								0					adhoc, NA	1	2	
Decoding	CF746-D2-B							0				Video Solution - Solver to be (Java)	adhoc, NA	1	2	p2
Bear and Friendsh								0				Video Solution - Eng Mohamed Salah	adhoc, NA	1	2	
Keyboard	<u>CF88-D2-B</u>							0				Video Solution - Eng Muntaser Abukadeja	adhoc, NA	1	2	p2
Kuriyama Mirai's S								0				Video Golddon Eng Warnaber / Ibakadeja	adhoc, prefix sum	1	2	PE
Vika and Squares								0					adhoc, prefix sum	1	2	
viita ana oquares	CF1237-D12-B							0					adhoc, prefix sum	1	3	р3
Alyona and mex	CF740-D2-C							0				Video Solution - Dr Mostafa Saad	adhoc, constructive	1	3	p2
Alyona and mex	UVA 11053							0				Find O(n) Solution	adhoc, cycle detection for iterated function		3	p1
Karen and Coffee								0				Tind O(n) Soldion		1	4	
Karen and Conee								0					adhoc, prefix sum	1	4	p5
	<u>CF1043-D12-C</u> CF1075-D2-C							0					adhoc, constructive	1	4	p3
	CF1075-D2-C CF1237-D12-C2							0					adhoc, constructive, sweep	1	4	p3
Mallata Obassiasia								0				Mid-a Oak-dian Oak-aata ka (Ia-aa)	adhoc, constructive	1		p3
Molly's Chemicals												Video Solution - Solver to be (Java)	adhoc		4	p2
Number of Ways								0				Video Solution - Solver to be (Java)	adhoc	1	4	p2
	SPOJ TWINSNOW							0				Sol - text clarification	adhoc, canonical form, [unclear text]	1	4	p1
	UVA 10920											Sol	adhoc, coordinate systems, math or simula		4	p1
0 # 5	SRM381-D2-1000							0					adhoc, sorting, [bubble sort]	1	4	p1
	CF194-D2-C							0					adhoc	1	4	
Hacker, pack your								0				Video Solution - Solver to be (Java)	adhoc	1	4	
Greg and Array	CF296-D2-C							0					adhoc, prefix sum	1	4	
	<u>CF1066-D3-E</u>							0					adhoc, string, math	1	4.25	
Almost Equal	CF1206-D2-C							0				Video Solution - Dr Mostafa Saad	adhoc, constructive	1		р3
Permutations	<u>CF189-D2-C</u>							0				Sol	adhoc	1	4.5	
	SRM274-D1-500							0					adhoc, canonical form, bf or greedy	1		p2
Array Division	CF808-D2-D							0				<u>Video Solution - Solver to be (Java)</u>	adhoc, string prefix	1	4.5	p1
Prime Permutation	CF124-D2-C							0					adhoc, constructive	1	4.5	
Try and Catch	CF195-D2-C							0				Editorial - Eng Ahmed Osama	adhoc, string parsing	1	4.5	
Title	<u>CF59-D2-C</u>							0					adhoc, string parsing	1	4.5	
	CF309-D1-C							0					adhoc, binary search, bitmasks or rmq	1	5	р3
	SPOJ KOMPICI							0					adhoc, bitmasks, [=spoj iitkwpch]	1	5	р3

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
Lucky Transforma	CF122-D2-D							0					adhoc, impl	1	5	р3
	SPOJ PARSUMS							0				Sol	adhoc, cyclic shifts, partial sum or segment	1	5	p2
	CODECHEF OPPOSIT	Γ						0					adhoc	1	5	p2
	SRM321-D1-500							0				See Rushiose's code in arena summary	adhoc, sorting, [print the smallest lexicograph	1	5	p2
Fish Weight	CF298-D2-D							0					adhoc	1	5	
Dividing Island	CF63-D2-D							0					adhoc	1	5	
Median Smoothing	CF591-D2-C							0				Editorial	adhoc, constructive, impl	1	5	
	CF23-D12-C							0					adhoc, sortings, overflow	1	5.25	р3
	CF101589-GYM-F							0				Sol	adhoc	1	5.75	
	Atcoder092-ARC-B							0					adhoc, bitmasks, binary search	1	6	р3
23 out of 5	UVA 10344							0				Video Solution - Eng Mohamed Nasser	backtrack	2	2	
8 Queens Chess F	UVA 750							0				Video Solution - Eng Ayman Salah	backtrack	2	4	
Graph Coloring	UVA 193							0				Video Solution - Dr Mostafa Saad	backtrack, graph, maximum independent se	2	4	
Safe	<u>CF47-D2-D</u>							0					backtrack, datastructures, impl	2	5	р3
	UVA 10058							0				Sol		3	4	p3
Grammar Evaluati								0				Sol	backtrack, expression parsing, [cnf]	3	5	p4
Help Vasilisa the V								0				Video Solution - Eng John Gamal	bf	5	1.5	PT
Gerald is into Art								0				Video Colution Englosin Camai	bf	5	2	
Simple Game	CF570-D2-B							0					bf	5	2	
								0				Video Colution Fire Abanah Ashraf		5	2	
Students and Sho								0				Video Solution - Eng Abanob Ashraf	bf		3	
Balls Game	<u>CF430-D2-B</u>							0				Video Octobra Octobra to the (Inves)	bf, two pointers	5	3	p2
Cut Ribbon	CF189-D2-A											Video Solution - Solver to be (Java)	bf		-	
Searching for Gra								0					bf, constructive	5	3	+
Bulls and Cows	<u>CF63-D2-C</u>							0				Sol	bf, impl	5	4	p2
Almost Arithmetica								0					bf	5	4	
Fancy Number	<u>CF118-D2-C</u>							0					bf or greedy	5	4	
Recycling Bottles								0					bf or greedy	5	4	
Devu and Partition	CF439-D2-C							0					bf, constructive, impl	5	4	
Football Champion	CF200-D2-C							0					bf, impl	5	4	
Sereja and Algorith	CF368-D2-C							0					bf, impl	5	4	
Arthur and Table	CF557-D2-C							0					bf, datastructures	5	4.5	
	CF1036-D2-C							0					bf, combinatorics	5	4.5	p2
Matrix	<u>CF365-D2-C</u>							0					bf, math	5	4.5	p1
Removing Column	CF496-D2-C							0				Video Solution - Dr Mostafa Saad	bf	5	4.5	
	UVA 12261							0					bf, [cases]	5	5	р3
	UVA 10705							0				Sol	bf, prune, binary base, bitmasks	5	5	р3
Lucky Number 2	CF146-D2-D							0					bf, impl or greedy	5	5	p2
Levko and Array R	CF361-D2-C							0					bf or greedy	5	5	p2
	CF1017-D12-D							0					bf, bitmasks or dp_adhoc	5	5.5	p3
	CF621-D2-D							0				Sol	bf, math, logs, [one solution use complex no		5.5	p2
	SRM513-D2-1000							0					bf or dp	5	5.5	p2
	CF633-D12-D							0					bf, hashing, impl, [idea that functions like fib	5	5.5	p2
	SRM525-D1-500							0					bf, graph, bitmasks	5	5.5	p3
Pipeline	CF287-D2-B							0				Video Solution - Dr Mostafa Saad	binary search	6	2.5	ро
Vanya and Lanterr								0				Video Solution - Solver to be (Java)		6	2.5	p2
•	SPOJ AGGRCOW							0				Video Solution - Eng Youssef El Ghareeb	binary search	6	3	PE
								0						6		
Hanoi Tower Troub												Video Solution - Eng Mahmoud Adel	binary search or simulation		3.5	
The Stern-Brocot								0					binary search, gcd	6	3.5	
Magical Boxes	CF270-D2-C							0					binary search, greedy, math, impl	6	4	p3
Image Preview	<u>CF651-D2-D</u>							0					binary search, bf, left-right trick	6	4	p2
Sagheer and Nubi	CF812-D2-C							0				Video Solution - Solver to be (Java)	binary search	6	4	

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
The Playboy Chim	UVA 10611							0				Video Solution - Eng Ayman Salah	binary search	6	4	
Modified GCD	CF75-D2-C							0				Video Solution - Dr Mostafa Saad	binary search, math	6	4	p2
Dictionary Subseq	SPOJ DICTSUB							0				Sol	binary search, lower bound	6	4.5	p2
Mr. Bender and So	<u>CF255-D2-D</u>							0					binary search	6	4.5	p1
	CF1060-D12-C							0					binary search, two pointers, armortized ana	6	5	р3
Multiplication Table	€ <u>CF448-D2-D</u>							0				Video Solution - Solve to be (Java)	binary search	6	5	p2
Garland	<u>UVA 1555</u>							0				Sol	binary search, math or formula	6	5	р3
	SPOJ ABA12E							0				Sol	binary search, [counting subarrays with sur	6	5.5	р3
Showstopper	SPOJ MSE07E							0				Read SPOJ users' comments about IO. See here	binary search, d&c, [issues in io, seems diff	6	6	р3
	SRM319-D1-500							0					bst, greedy, combinatorics	8	5.5	p2
	SPOJ POSTERIN							0				Sol	datastructures, stack	9	3	p4
Knight Tournamen	CF357-D2-C							0					datastructures, set	9	3	
	LiveArchive 8078							0				Sol	datastructures, stack or dp, [count the longe	9	4	p4
Queue	CF92-D2-D							0					datastructures, grid compress	9	4	p2
Thor	CF705-D2-C							0					datastructures, impl	9	4	p2
Database	UVA 1592							0					datastructures, multimap, hashing, bf	9	4	p2
Little Girl and Max	CF276-D2-C							0					datastructures, impl, sortings	9	4	i i
Anya and Smartph								0					datastructures, impl	9	4.5	
Lorenzo Von Matte								0					datastructures, impl, trees	9	4.5	
Weird Function	SPOJ WEIRDFN							0				Sol	datastructures, heap, min max heaps, [res		5	p4
Black Box	UVA 501							0				Sol - Must Read	datastructures, heap, min_max or bbst or s		5	p2
The SetStack Con								0				Sol	datastructures, sets intersections and unior		5	p2
THE OCIOIACK CON	CF899-D2-E							0				001	datastructures, lists or sets merging	9	5.5	p3
Mike and Feet	CF548-D2-D							0						-		p2
								0				0.1	datastructures, stack or rmq or segment tre		5.5	
Boxes in a Line	UVA 12657							0				Sol	datastructures, linked list, impl	9	5.5	p1
Expressions	UVA 11234							0				Sol	datastructures, stack & queue	-	6	p2
0 0	UVA 11997											Sol	datastructures, heap, [counting subarrays v		6.25	
Cutting Sticks	UVA 10003							0					dp, [use scanf, you may need to avoid men		3	p2
Dividing coins	UVA 562							0				Video Solution - Eng Ayman Salah	dp	10	3	
Vacation	UVA 10192							0				Explained in the tutorial videos	dp, lcs	10	3	
Divisibility	UVA 10036							0				Sol	dp, math	10	3	
Longest Match	UVA 10100							0				Sol	dp, lcs	10	3.5	
	<u>CF1057-D12-C</u>							0					dp, 2d grid	10	4	p2
Alternative Thinkin	CF604-D2-C							0					dp or greedy	10	4	p2
String to Palindron	T <u>UVA 10739</u>							0				Explained in the tutorial videos	dp	10	4	
Trouble of 13-Dots	UVA 10819							0					dp, [knapsack]	10	4	
Woodcutters	CF545-D2-C							0					dp, dp_memo	10	4	
Counting	<u>UVA 10198</u>							0				Needs Big Integer: Have it in your cpp library or l	dp, graph, cc	10	4	
Given Length and	CF489-D2-C							0					dp, greedy, impl	10	4	
Strategic Defense	UVA 497							0				Explained in the tutorial videos	dp, lis, [direct lis]	10	4	
Hard problem	CF706-D2-C							0					dp	10	4.5	p1
Boredom	CF456-D2-C							0					dp	10	4.5	
Coloring Trees	CF711-D2-C							0				Video Solution - Solver to be	dp	10	4.5	
Again Palindrome								0				Sol to read	dp	10	4.5	
Scheduling Lectur								0				Sol	dp	10	4.5	
	CF792-D2-C							0				Video Solution - Solver to be (Java)	dp, dp memo or greedy	10	4.5	
Wavio Sequence								0				Sol	dp, lis efficient, lis indices or segment tree	10	5	р3
Good Sequences								0					dp, sieve, binary search	10	5	p3
	CF366-D2-C							0					dp, knapsack	10	5	p2
5ia ana Galad	CF101-D1-B							0				Sol	dp, datastructures or binary search, impl	10	5	p2
	CF101-D1-B							0				<u>COI</u>	dp, lis, onlogn, reduce to efficient lis or dp,		5	p2

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
	CF506-D1-A							0					dp, observation	10	5	p2
Barcode	CF225-D2-C							0				Video Solution - Dr Mostafa Saad	dp	10	5	
Vacations	CF699-D2-C							0					dp	10	5	
Greenhouse Effect	CF270-D2-D							0					dp, lcs, analysis	10	5	
Journey	CF721-D2-C							0					dp, graph or dijkstra	10	5	p2
	CF264-D1-C							0					dp, [non standard]	10	5.5	p4
Cow Program	CF284-D2-D							0					dp, analysis	10	5.5	p3
	CF1066-D3-F							0					dp, cases	10	5.5	р3
Optimal Array Mul								0				Sol	dp, mcm	10	5.5	p3
Optimal / tiray inta	SRM569-D2-1000							0					dp, primes	10	5.5	p3
Ilya and Roads	CF313-D2-D							0					dp, tree	10	5.5	p3
ilya aliu Roaus	TIMUS 1156							0						10		-
Outside Burstate								0				0.1	dp, bicoloring, is bipartite		5.5	p2
Coloring Brackets												Sol	dp, dp_conting, dp_ranges	10	5.5	p2
	CF1012-D1-C							0					dp, [non standard]	10	5.5	p2
	<u>CF623-D1-B</u>							0					dp, gcd	10	5.75	-
	<u>CF1072-D2-D</u>							0					dp, greedy	10	5.75	-
	CF1025-D2-D							0					dp, d&c	10	6	p2
	FbHkrCup 18-R1-A							0					dp, dp_adhoc, [non standard]	11	5	p2
Kefa and Dishes	<u>CF580-D2-D</u>							0				Video Solution - Solver to be	dp, dp_bitmasks	13	4	p2
Permutations	SPOJ PERMUT1							0					dp, dp_bitmasks	13	4	p2
Assignments	SPOJ ASSIGN							0					dp, dp_bitmasks	13	4	p1
Pebble Solitaire	UVA 10651							0					dp, dp_bitmasks	13	4	p1
	UVA 11825							0				Sol	dp, dp_bitmasks, mask-all-subsets, [direct	13	5	p2
Nuts for nuts	UVA 10944							0					dp, dp_bitmasks, tsp or bfs, impl	13	5	i i
Random Task	CF431-D2-D							0						13	5.5	р3
Shopping Trip	UVA 11284							0				Sol	dp, dp_bitmasks, floyd	13	6	
Gone Fishing	UVA 757							0				Sol to read	dp, dp_build_output	15	3	
Make Palindrome								0				Sol	dp, dp_build_output, [similar to edit distanc		3.5	р3
Fast Food	UVA 662							0				301		15	4.5	p3 p2
Palindromic Subse								0					dp, dp_build_output	15	4.5	p∠
								0					dp, dp_build_output			
Unidirectional TSF													dp, dp_build_output	15	4.5	
Changing a String								0					dp, dp_build_output, [edit distance]	15	4.5	
Caesar's Legions								0					dp, dp_counting	18	3	
<u>UnsealTheSafe</u>	SRM354-D2-1000							0					dp, dp_counting	18	3	
k-Tree	<u>CF431-D2-C</u>							0				<u>Video Solution - Solver to be (Java)</u>	dp, dp_counting, dp_trees	18	3.5	
<u>DiceGames</u>	SRM349-D1-500							0					dp, dp_counting	18	4	p2
Flowers	<u>CF474-D2-D</u>							0				Video Solution - Solver to be (Java)	dp, dp_counting	18	4.5	p2
	SRM428-D2-1000							0					dp, dp_counting or perm, adhoc	18	5	p2
	SRM144-D1-500							0					dp, dp_counting or math, combinatorics	18	5	
	SRM514-D1-500							0					dp, dp_counting, dp_bitmasks	18	6.25	p4
Little Girl and Max	CF276-D2-D							0				See editorials	dp, dp_digit or impl	22	4.5	p1
Roman and Numb	CF401-D2-D							0					dp, dp_digit, dp_bitmasks or adhoc	22	5	р3
Find Pair	CF160-D2-C							0					dp, dp_digit or binary search	22	5	Ť.
BagsOfGold	SRM228-D1-500							0					dp, dp_games, minimax	23	3	р3
Bachet's Game	UVA 10404							0				Sol	dp, dp_games	23	3	
RowAndCoins	SRM522-D1-250							0				350	dp, dp_games dp, dp_games, dp_bitmasks or adhoc	23	3	
NOWATIGUES								0							4	n2
Eller Obereler	CF1033-D12-C												dp, dp_games, [harmonic progression]	23		р3
EllysCheckers	SRM534-D1-250							0					dp, dp_games, dp_bitmasks or game theor		4	
Bag of mice	<u>CF148-D2-D</u>							0					dp, dp_games, dp_probability	23	4.5	p2
	<u>UVA 10578</u>							0				Sol	dp, dp_games	23	4.5	
Find the Winning I	N <u>UVA 10111</u>							0				Sol	dp, dp_games or backtrack, minmax (alpah	23	5.5	р3

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
Tennis contest	<u>UVA 12457</u>							0				Sol	dp, dp_probability or probability	29	3.5	
First Digit Law	CF54-D12-C							0					dp, dp_probability	29	4	p2
France '98	<u>UVA 542</u>							0				Sol	dp, dp_probability, [=pku 3071]	29	4.5	р3
Bad Luck Island	<u>CF540-D2-D</u>							0					dp, dp_probability	29	4.5	p2
TestBettingStrate	g SRM339-D1-500							0					dp, dp_probability	29	4.5	p2
Dice Throwing	UVA 10759							0				Sol	dp, dp_probability, counting style	29	4.5	p2
Wizards and Hug	e <u>CF168-D2-D</u>							0					dp, dp_probability	29	4.5	
	CF28-D12-C							0					dp, dp_probability, combinatorics or adhoc	29	5	р3
Check the difficult	ty <u>PKU 2151</u>							0				Sol	dp, dp_probability	29	5	р3
	CF16-D2-E							0					dp, dp_probability, dp_table, masks	29	5	р3
Let's Dance	UVA 10218							0				Sol	dp, dp_probability or combinatorics	29	5	p1
Tribbles	UVA 11021							0				Sol	dp, dp_probability, dp_table, [independece	29	5.5	р3
Collecting Bugs	PKU 2096							0				Sol	dp, dp_probability or math, [hard text for fev		5.5	p2
Winning Streak	UVA 11176							0				Sol	dp, dp_probability	29	6	Ť T
Creating Palindro	on UVA 11753							0				Video Solution - Eng Aya Elymany	dp, dp_ranges, lcs or backtrack	32	4.5	р3
	CF101294-GYM-I							0				Sol	dp, dp_ranges	32	4.5	p1
	SRM441-D1-250							0					dp, dp_ranges, [consective ranges, cyclic p		5	p2
	SRM536-D2-1000							0					dp, dp_ranges, [consective ranges]	32	5	p1
<u>MessageMess</u>	SRM149-D1-500							0						32	5	Pi
WC33agcWC33	SRM555-D2-1000							0					dp, dp_ranges, [consective ranges]	32	5	
	SRM558-D1-250							0						32	5.5	p2
Contains Domesic								0				Video Colution Fine Aumon Colob		32	5.5	μZ
Exploring Pyramic								0				Video Solution - Eng Ayman Salah	dp, dp_ranges			
Brackets sequence												Sol	dp, dp_ranges	32	5.5	
	SRM509-D1-500							0					dp, dp_ranges, floyd, [cases]	32	6	p4
	UVA 507							0					dp, dp_subrectangle, 1d, [more direct uva 1		3	
	UVA 10667							0					dp, dp_subrectangle, 2d	36	3	
Big Maximum Sur								0					dp, dp_subrectangle, 2d, [actually greedy v		5	p2
	SPOJ FISHES							0				Sol	dp, dp_subrectangle, 2d, observations, dot	36	5.5	p3
Reberland Linguis	st <u>CF667-D2-C</u>							0					dp, dp_table	37	4.5	р3
Red-Green Tower	rs <u>CF478-D2-D</u>							0					dp, dp_table, dp_roll	37	5	р3
Cunning Gena	CF418-D1-B							0					dp, dp_table, dp_roll, dp_bitmasks, sortings	37	5.5	p4
	ZOJ 3305							0				Sol	dp, dp_table or dp_bitmasks, all submasks	37	5.5	p4
An overnight dand	c <u>CF814-D2-D</u>							0				Video Solution - Solver to be (Java)	dp, dp_trees, geometry or greedy	38	5	p3
	<u>CF161-D12-D</u>							0				Reading: DP on Trees	dp, dp_trees or dsu-on-trees	38	5	p2
Vertex Cover	SPOJ PT07X							0				Sol	dp, dp_trees	38	5	
	CF337-D2-D							0				Sol	dp, dp_trees or diameter like, [tricky to gues	38	5.5	p4
Chloe and pleasa	n <u>CF743-D2-D</u>							0					dp, dp_trees	38	5.5	p2
	Timus 1362							0				Sol	dp, dp_trees or greedy	38	5.5	p2
	UVA 1218							0				Sol	dp, dp_trees, [vertex cover releated]	38	5.75	p2
Playing Cubes	CF257-D2-B							0					game theory, greedy	41	2.5	1
Euclid's Game	UVA 10368							0				Video Solution - Eng Moaz Rashad	game theory, gcd, dfs or pattern, [why each	41	3.5	p2
	CF1220-D12-C							0					game theory, adhoc	41	3.5	p2
Alice and Bob	CF347-D2-C							0				Video Solution - Eng Mohamed Nasser	game theory, gcd	41	4	p1
Win or Freeze	CF151-D2-C							0				Video Solution - Dr Mostafa Saad	game theory, ged game theory, divisors, greedy	41	4	p1
Brownie Points	UVA 10865							0				Video Solution - Eng Magdy Hasan	geometry	45	2	p1
DIOWING FUILIS	SRM436-D2-500							0				wide Solution - Eng Mayay Hasan		45	3	p1
Dointo in Ciarra								0					geometry, [slopes comparison]			ρī
Points in Figures:								0					geometry	45	3	
Watering Flowers													geometry, bf	45	3	
Pouring Rain	CF667-D2-A							0				Mides October Front 1	geometry, physics	45	3	
Fourth Point !!	UVA 10242							0				Video Solution - Eng Magdy Hasan	geometry, vectors addition	45	3	+
Captain Marmot	CF474-D2-C							0				Video Solution - Dr Mostafa Saad	geometry, check square, point rotation, bf	45	3.5	p2

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
Overlapping Rect	ta <u>UVA 460</u>							0				Video Solution - Eng Muntaser Abukadeja	geometry	45	3.5	
Xrange's Pancak	e: HACKR xrange-and-piz							0				Sol	geometry, adhoc	45	4	p2
	HACKR a-circle-and-a-							0					geometry, ccw, parametric equ, in circle	45	4	p2
	SPOJ FACENEMY							0				Sol	geometry, angles, precision	45	4	p1
k-Multiple Free S	e <u>CF275-D2-C</u>							0					geometry	45	4	
Gerald's Hexagor	CF560-D2-C							0					geometry	45	4	
View Angle	CF257-D2-C							0				Editorial - Eng Ahmed Osama	geometry, angles	45	4	
Watchmen	CF651-D2-C							0					geometry, datastructures	45	4	
Bicycle Race	CF659-D2-D							0					geometry, impl, [very nice, o(1) and o(n) so	145	4.5	р3
Pyramids	SPOJ PIR							0				Sol	geometry, formula or matrix determinant	45	4.5	p1
Pythagorean Trip	le <u>CF707-D2-C</u>							0					geometry, triangles, formula	45	4.5	p2
	SPOJ BILLIARD							0				Sol	geometry, angles, physics	45	5	
Cupboard and Ba	all CF342-D2-C							0					geometry	45	5	р3
	CF1064-D2-E							0					geometry, binary search, interactive	45	5	р3
	CF961-D12-D							0					geometry	45	5	p2
	CF101917-D12-E							0					geometry, [ppl scared in contest, but easy]	45	5	p2
	CF552-D2-D							0					geometry, bf, counting, treemaps	45	5	p2
	<u>CF1016-D2-E</u>							0					geometry, binary search	45	5	p2
	CF1058-D2-D							0						45	5	p2
								0				Cal	geometry, triangles, number theory		-	þΖ
	UVA 1342							0				<u>Sol</u>	geometry, plane graph	45 45	5	
	<u>CF101864-GYM-L</u>							0				Sol	geometry, binary search or bf, greedy		5.5	p3
	<u>CF80-D2-D</u>												geometry, probability or algebra	45	5.5	p2
	UVA 11648							0				Sol	geometry, trapezoid formula, binary search		6	p2
	UVA 1333							0				Sol - Text/Background Clarification	geometry, triangles, angles, parallelogram l		6	p1
Hit Ball	<u>CF203-D2-D</u>							0					geometry, 3d, impl, math, [physics, kinema		5	p2
	UVA 453							0				Learn Handling Precisions	geometry, circles, [direct circle intersection,		2	
Wifi Access	<u>UVA 12748</u>							0				Sol	geometry, circles, distances	47	2	
Rings and Glue	<u>UVA 10301</u>							0				Sol	geometry, circles, dsu	47	3	p1
Square Pegs And	UVA 356							0				Sol to read	geometry, circles	47	3	
The Circumference	CE <u>UVA 438</u>							0				Sol	geometry, circles	47	3	
Points in Figures:	UVA 477							0				Sol	geometry, circles	47	3.5	
Special Olympics	<u>CF199-D2-B</u>							0					geometry, circles, impl	47	4	
Biathlon	<u>CF84-D2-C</u>							0					geometry, circles, impl	47	4	
Packing polygons	UVA 10005							0				Sol	geometry, circles, polygon, [polyon inside p	47	5	p4
	SRM473-D1-500							0					geometry, circles, triangles, thales' theorem	47	5	р3
	SPOJ ALIENS							0				Sol - Practice on min enclosing circle	geometry, circles, min enclosing circle, [=sp	47	5	p2
	CF1059-D2-D							0					geometry, circles, binay search	47	5.25	р3
	HACKR house-location							0				Sol	geometry, circles, algebra, impl	47	5.5	р3
	UVA 10180							0				Sol	geometry, circles, tangents, point on segme	47	5.5	p2
Railway	UVA 10263							0				Sol to read	geometry, lines, distances, [=uva 460]	48	3	p3
Lining Up	UVA 270							0				Video Solution - Eng Mohamed Nasser. Don't Co		48	3	р3
Campus Roads	UVA 11473							0				Sol	geometry, lines, distances, impl	48	3	p2
Polyline	CF617-D2-D							0					geometry, lines, impl	48	3	
Jack Straws	UVA 273							0				Sol	geometry, lines, intersection, shortest path	48	3	
Isolated Segment								0				Sol	geometry, lines, intersections	48	3	
								0				<u></u>		48	3.5	
Intersecting Lines								0				Cal	geometry, lines			
Internation 15	SRM373-D2-1000							-				<u>Sol</u>	geometry, lines, lines intersection, rectangle		4	
Intersecting Line								0				Sol	geometry, lines, intersections	48	4	
	SRM368-D1-500							0				Sol	geometry, lines, polyline intersection, bf, na		4	
Gleaming the Cul								0				Sol	geometry, lines, intersections	48	4	
Water Falls	UVA 833							0				Sol	geometry, lines, distances, adhoc	48	4	p3

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
How Many Points	UVA 10790							0				Sol	geometry, lines, intersections, counting, for	r 48	4	p1
River Crossing	UVA 10514							0				Sol	geometry, lines, distances, floyd	48	5	
BestTriangulation	SRM278-D2-500							0					geometry, polygon, area, [just triangle area	s 49	2	
Triangle	CF408-D2-C							0					geometry, polygon	49	4	
	UVA 11665							0				Sol	geometry, polygon, pip, polygons intersecti	49	4	
	TIMUS 1599							0				Sol	geometry, polygon, pip, winding numbers, [	49	4.5	p1
	UVA 881							0				Sol	geometry, polygon, pip, polygons inside po		4.5	
	CF340-D2-B							0					geometry, polygon, bf	49	5	p2
Volatile Kite	CF801-D2-D							0				Sol	geometry, polygon, binary search	49	5	p2
Polygons	UVA 137							0				Sol	geometry, polygon, pip, intersections or cor	149	5.5	p3
Area	TJU 1011							0				Sol	geometry, polygon, pick's theorem	52	4.5	p1
Trees on My Islan								0					geometry, polygon, pick's theorem, gcd	52	5	-
Trocc on my loan	LIVEARCHIVE 2831							0				Use polygon cut	geometry, polygon, polygon cut	53	4	
Video Surveillance								0				Use polygon cut	geometry, polygon, polygon cut or adhoc	53	6	p5
The Skyline Proble								0				Ose polygon cut	greedy, geometry	55	3	ро
Marcus	UVA 10452							0				Video Solution - Eng Ayman Salah		55	3	
Trees on the level								0				Video Solution - SolverToBe (Java)	graph	55	3	
PT07Z								0					graph, trees			
	SPOJ PT07Z							0				Sol	graph, tree diameter	55	3	
Roads in the North								0				Sol	graph, tree diameter	55	3	+
	CF1068-D2-C												graph, adhoc	55	4	p2
Eternal Victory	<u>CF61-D2-D</u>							0					graph, greedy	55	4	p2
Is It A Tree?	UVA 615							0					graph, trees	55	4	p1
Mahmoud and Eh								0				Video Solution - Eng Mohamed Salah	graph, trees, constructive	55	4	
Central Post Office								0				Sol	graph, tree diameter	55	4	
The Tree Root	<u>UVA 10459</u>							0				Sol	graph, tree diameter	55	4.5	р3
Xor-tree	CF430-D2-C							0					graph, bf	55	5	
Renting Bikes	CF363-D2-D							0					graph, cycle, greedy	55	5	
Regular Bridge	CF550-D2-D							0					graph, prove using e.g. scc	55	5	
	<u>CF486-D2-D</u>							0					graph, trees, dfs, prefix sum or dp_trees	55	5.5	p5
Cycles	<u>CF233-D2-C</u>							0					graph, cycle	55	5.5	р3
	CF459-D2-E							0					graph, dp, sortings	55	5.5	р3
	CF1060-D12-D							0					graph, greedy	55	5.5	р3
	UVA 10982							0				Sol	graph, greedy, [close to max cut]	55	5.5	р3
	CF592-D2-D							0					graph, tree diameter	55	5.5	р3
BITMAP - Bitmap	SPOJ BITMAP							0				Editorial	graph, bfs, multisrc, multidest	57	3	р3
Pouring water	SPOJ POUR1							0				Video Solution - Eng Moaz Rashad	graph, bfs	57	3	
Jugs	UVA 571							0				Video Solution - Dr Mostafa Saad	graph, bfs	57	4	p1
Tic-Tac-Toe (1)	SPOJ TOE1							0				Video Solution - Eng Ayman Salah	graph, bfs	57	4	1
Tic-Tac-Toe (II)	SPOJ TOE2							0				Video Solution - Eng Essam AlNaggar	graph, bfs	57	4	
Knight Moves	UVA 439							0				Video Solution - Eng Magdy Hasan	graph, bfs, chess or dfs	57	4	
King's Path	CF242-D2-C							0				Video Solution - Dr Mostafa Saad	graph, bfs	57	4.5	
Theseus and laby								0				VIGO COIDENT DI MOSICIA CADO	graph, bis graph, bfs, impl	57	4.5	p2
Wandering Queen								0				Sol to read	graph, bis, impl	57	4.5	p2 p1
Restore Graph	CF404-D2-C							0				25.15.1644	graph, bis	57	4.5	P'
Key Task	SPOJ CERCO7K							0						57	4.5	
•								0					graph, bfs, bitmask		4.5	
Cleaning Robot	SPOJ CLEANRBT							0					graph, bfs, bitmask or bfs preprocess then			
T 4 E-114	UVA 10888												graph, bfs, dp or weighted matching	57	5	p3
Text Editor	CF253-D2-C							0					graph, bfs or greedy, [search in 2d grid]	57	5	p2
Tobo or not Tobo								0				Sol	graph, bfs, trie, hashing or meet in middle	57	5	-
	CF1005-D3-F							0					graph, bfs	57	5.25	-
	TIMUS 1498							0					graph, bfs, [chess, tricky cases]	57	5.5	p2

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
	UVA 11573							0				Learn 0/1 BFS	graph, bfs, 0/1 bfs, [~spoj kaththi]	57	5.5	p2
	CF787-D2-C							0					graph, bfs, cyclic games	57	5.5	p1
	CF811-D2-D							0					graph, bfs, interactive	57	6	p2
	UVA 10461							0					graph, dfs, [finish computation times]	60	3	p1
Roads in Berland	CF25-D2-C							0					graph, dfs	60	4	p2
Party	CF116-D2-C							0					graph, dfs	60	4	p1
Forming Teams	CF216-D2-B							0				Video Solution - Dr Mostafa Saad	graph, dfs	60	4	
Block Tower	CF327-D2-D							0					graph, dfs	60	4	
Soldier and Cards	CF546-D2-C							0					graph, dfs	60	4	
Kefa and Park	CF580-D2-C							0				Video Solution - Solver to be (Java)	graph, dfs	60	4	p2
Maze	CF378-D2-C							0					graph, dfs, [reverse thinking]	60	4.5	p1
Exchange Rates	UVA 10113							0					graph, dfs, impl	60	4.5	p1
Ice Cave	CF540-D2-C							0					graph, dfs	60	4.5	1
Ordering	UVA 872							0				Sol	graph, dfs	60	4.5	
	CF711-D2-D							0					graph, dfs, combinatorics, formula	60	5	р3
	SPOJ BIA							0				Sol	graph, dfs or directed articulation points alg		5	p2
Choosing Capital f								0					graph, dfs or dp trees	60	5	
onocomy capitar	CF1075-D2-D							0					graph, dfs, interactive	60	5.5	р3
Infinite Maze	CF197-D2-D							0					graph, dfs	60	5.5	po
	CF263-D2-D							0					graph, dfs	60	5.5	
	CF237-D2-D							0					graph, dfs, greedy	60	5.5	
Robbery	UVA 707							0				Sol		60	5.75	
Persistent Bookca								0				<u>Sol</u>	graph, dfs or dp graph, dfs, bitset or persistent segment tree		6	p3
								0				<u>Sol</u>				-
Moodular Arithmet								0				Sol	graph, dfs, fermat, [rearangement proppert		6	p2
The Seasonal War												Video Solution - Eng Mohamed Nasser	graph, dfs, flood-fill	61	2	
Battleships	UVA 11953							0				Video Solution - Eng Aya Elymany	graph, dfs, flood-fill	61	3.5	
Maze Exploration								0				Video Solution - Eng Mahmoud Adel	graph, dfs, flood-fill	61	3.5	
Continents	UVA 11094							0				Video Solution - Eng Ayman Salah	graph, dfs, flood-fill	61	4	+
	SRM297-D1-500							0					graph, dfs, flood-fill or bfs, bf	61	5	p3
Equivalent Strings								0				Sol to learn	graph, dfs, isomorphism or d&c, hashing	62	4	p2
	LIVEARCHIVE 2935							0				Sol	graph, dfs, isomorphism, canonical form or		4.5	p4
Hierarchy	SPOJ MAKETREE							0				Video Solution - Eng Yahia Ashraf	graph, dfs, topological sort	63	2	
Ordering Tasks	<u>UVA 10305</u>							0				Video Solution - Eng Yahia Ashraf	graph, dfs, topological sort	63	3	
	SRM419-D2-1000							0					graph, dfs, topological sort, cycles	63	4	
Spreadsheet	<u>UVA 196</u>							0				Sol	graph, dfs, topological sort or dp	63	4	р3
Rankings	UVA 12263							0				Sol	graph, dfs, topological sort	63	4	p2
Pick up sticks	UVA 11686							0				Sol	graph, dfs, topological sort, detect cycles	63	4	
	SRM550-D2-1000							0					graph, dfs, topological sort	63	5	р3
Robot Rapping Re	CF645-D12-D							0					graph, dfs, topological sort, binary search	63	5	p3
Gifts by the List	<u>CF681-D2-D</u>							0					graph, dfs, topological sort, impl	63	5	p2
Sagheer and Kind	CF812-D2-D							0				Sol	graph, dfs, topological sort or euler, [https://	63	6	p4
Shopping	SPOJ SHOP							0					graph, dijkstra	64	3	
Sending email	UVA 10986							0					graph, dijkstra	64	3	
MELE3	SPOJ MELE3							0				Sol	graph, dijkstra	64	4.5	
Roads	SPOJ ROADS							0				Sol	graph, dijkstra or dp	64	4.5	р3
Lift Hopping	UVA 10801							0					graph, dijkstra	64	4.5	
•	UVA 10740							0				Sol	graph, dijkstra, kth sp. [k <= 10]	64	5	р3
Volleyball	CF96-D2-D							0					graph, dijkstra, 2 dijkstra	64	5	p3
•	UVA 12047							0				Sol	graph, dijkstra	64	5.5	p3
	UVA 10342							0				Sol - read the statement clarification	graph, dijkstra, kth sp (k=2) or floyd	64	5.5	p3
Hotel booking	UVA 11635							0				Sol	graph, dijkstra	64	5.5	

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
IP-TV	UVA 1174							0					graph, dsu	65	2	
Count the Faces.	<u>UVA 10178</u>							0				Read first Euler Formula	graph, dsu or dfs, cycles	65	4	p2
Learning Languag	CF278-D2-C							0					graph, dsu	65	4	
Virtual Friends	UVA 11503							0				Video Solution - Eng Moaz Rashad	graph, dsu	65	4	
Almost Union-Find	UVA 11987							0				Sol	graph, dsu	65	4.5	р3
Cthulhu	CF104-D2-C							0					graph, dsu	65	4.5	
The Child and Zoo	CF437-D2-D							0					graph, dsu	65	5	
Mahmoud and a D	CF766-D2-D							0				Video Solution - Solver to be (Java)	graph, dsu, [offline processing]	65	5	р3
	CF1012-D1-B							0					graph, dsu	65	5.25	p2
	UVA 12128							0					graph, dsu, dijkstra like or binary search, bf	65	5.5	p2
Connected Comp	CF292-D12-D							0					graph, dsu	65	5.75	р3
Trip Routing	UVA 186							0				Sol	graph, floyd, path print	68	4	p3
Numbering Paths								0				Sol	graph, floyd, paths counting	68	4.5	p5
Frogger	UVA 534							0				Sol	graph, floyd, minimax or dsu	68	4.5	p4
	UVA 10816							0				Sol	graph, floyd, binary search	68	4.5	-
Identifying Concur								0					graph, floyd	68	4.5	
	CF296-D2-D							0					graph, floyd	68	5	p2
Dima and Bacteria								0					graph, floyd, dfs	68	5	p2
AlgoRace	CF189-D2-D							0				Sol	graph, floyd	68	5.25	
Antifloyd	UVA 10987							0				Sol	graph, floyd, antifloyd	68	5.5	p4
Unique World	UVA 10448							0				Video Solution - Dr Mostafa Saad	graph, floyd, dp	68	5.5	p2
Arbitrage	UVA 104							0				Sol	graph, floyd	68		
Potholers	SPOJ POTHOLE							0				Sol	graph, max-flow	71	3	pΣ
Power Transmissi								0						71	4	
								0				Sol				
The Problem with								0				0-1		71	4.5	p3
Crimewave	UVA 563											Sol	graph, max-flow, vertex constraints, sparse		5.5	p4
Intergalactic Map								0				Sol	graph, max-flow, [vertex disjoint path/ super		5.5	p2
A Plug for UNIX	UVA 753							0				Sol	graph, max-flow, impl	71	5.5	p2
March of the Peng								0				Sol	graph, max-flow, vertex constraints	71	6	
Gopher II	UVA 10080							0				Sol	graph, max-flow, bipartite match	72	4	
Software Allocatio								0				Sol	graph, max-flow, bipartite match or impl	72	4.5	
	UVA 670							0				Sol	graph, max-flow, bipartite match	72	5	p3
	UVA 1184							0				Sol	graph, max-flow, bipartite match, min path of		5	p2
	UVA 1194							0				Sol	graph, max-flow, bipartite match, min vertex	72	5.5	p4
	<u>UVA 10349</u>							0				Sol - 2 ways	graph, max-flow, bipartite match, max indep	72	5.5	р3
	<u>UVA 11159</u>							0				Sol	graph, max-flow, bipartite match, min path of	72	5.5	р3
	UVA 12168							0				Sol	graph, max-flow, bipartite match, konig's the	72	6	p3
	SPOJ QUEST4							0				Sol	graph, max-flow, bipartite match	72	6	p2
	UVA 663							0				Sol	graph, max-flow, bipartite match	72	6	p1
Sabotage	<u>UVA 10480</u>							0				Sol	graph, max-flow, min-cut, [print, as in video	74	4.5	p1
Unique Attack	ZOJ 2587							0				Sol	graph, max-flow, min-cut, cut edges	74	5	p2
Angry Programme	UVA 11506							0				Sol	graph, max-flow, min-cut, vertex constraints	74	5.25	p3
PeopleYouMayKn	SRM447-D1-500							0				Don't use DP. Check it later in editorial. Sol	graph, max-flow, min-cut or dp	74	5.5	p3
	SPOJ COCONUTS							0				Sol	graph, max-flow, min-cut	74	6	р3
	SRM465-D1-500							0				Sol	graph, max-flow, min-cut	74	6.25	р3
Highways	UVA 10147							0				Video Solution - Eng Mahmoud Adel	graph, mst	76	3	
Is There A Second	UVA 10462							0				Sol	graph, mst, 2nd mst	76	3	
	UVA 10843							0				Theory result to read	graph, mst, # of spanning trees of complete		4	p2
ACM contest and								0				Video Solution - Eng Moaz Rashad	graph, mst, 2nd mst	76	4.5	p1
	SRM492-D2-1000							0					graph, mst	76	5	р3
	CF472-D12-D							0					graph, mst, [cases], [validate tree]	76	5	р3

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
RACING	<u>UVA 1234</u>							0				Sol	graph, mst, max spanning tree	76	5	p2
Arctic Network	<u>UVA 10369</u>							0					graph, mst, [prime fails]	76	5	p2
KingdomReorgan	SRM531-D2-1000							0					graph, mst	76	5	p1
Lazy Student	CF606-D2-D							0					graph, mst	76	5	
<u>ActivateGame</u>	SRM470-D2-1000							0					graph, mst	76	5.25	
Minimal Ratio Tre	e <u>LIVEARCHIVE 4326</u>							0					graph, mst, combinatorics	76	6	
The Bottom of a C	SPOJ BOTTOM							0				Sol	graph, scc	77	3	
Test	UVA 10731							0				Sol	graph, scc	77	3.5	
Dominos	UVA 11504							0				Sol	graph, scc or topological sort, [=uva 11770	77	4.5	p1
	CF467-D2-D							0					graph, scc, hashing or dijkstra	77	5	
	SRM312-D1-500							0					graph, scc, greedy, [scc floyd]	77	5.5	p2
Proving Equivaler								0				Sol	graph, scc	77	5.5	-
	SRM608-D2-1000							0				Sol	graph, bf, floyd, cycles or max flow		5.75	
	SRM391-D2-1000							0				35.	graph, scc, dp, [scc may help thoughts]	77	6	р3
	SRM495-D1-500							0					graph, see, ap, [see may neep thoughts] graph, see, probability, [more about probab		6.25	
	CF403-D1-C							0					graph, scc, matrix or optimized bf, [using the		6.25	
Summer sell-off	CF810-D2-B							0				Video Solution - Solver to be (Java)	greedy	84	2	p2
Minimum Ternary								0				video Solution - Solver to be (Java)		84	2	pΣ
								0					greedy			
Towers	CF479-D2-B							0					greedy	84	2	
Semifinals	<u>CF378-D2-B</u>												greedy	84	2	
The Child and Se								0					greedy, sorting, bitmasks	84	2.5	+
Sort the Array	<u>CF451-D2-B</u>							0				Video Solution - Solver to be (Java)	greedy, sorting	84	2.5	p2
Mahmoud and a T								0				Video Solution - Solver to be (Java)	greedy	84	2.5	р3
Escape from Ston								0					greedy, impl	84	3	
Fixing Typos	<u>CF363-D2-C</u>							0					greedy, impl	84	3	
Photographer	<u>CF203-D2-C</u>							0					greedy, sorting	84	3	
Booking System	<u>CF416-D2-C</u>							0					greedy, sorting or dp	84	3.5	р3
Treasure Hunt	CF979-D2-B							0					greedy, [cases]	84	3.5	p1
Assemble	UVA 12124							0				Sol	greedy, bf or binary search	84	4	
	CODECHEF KSUM							0					greedy, sets, finding max k subarrays	84	4	р3
	CF1064-D2-C							0					greedy, palindromes	84	4	р3
	CF534-D2-D							0					greedy, set or grid compress	84	4	p2
	CF1065-D2-C							0					greedy	84	4	p2
	CF445-D2-C							0					greedy	84	4	p2
Geometric Progre	s CF567-D2-C							0					greedy	84	4	p2
	SRM481-D1-500							0					greedy, math	84	4	p2
Team	CF401-D2-C							0					greedy, constructive	84	4	1
Drazil and Factori								0				Video Solution - Dr Mostafa Saad	greedy, math	84	4	
Hiring Staff	CF216-D2-C							0					greedy	84	4	
Star sky	CF835-D2-C							0				Video Solution - Solver to be (Java)	greedy, prefix sum 2d	84	4	
Vanya and Exams								0				- Tudo Scialori Corror to 20 (Sara)	greedy, sorting	84	4	
variya ana Exame	ZOJ 1200							0				Sol	greedy, simulation, priority queue	84	4.5	р3
	CF729-D12-D							0				<u>561</u>	greedy, [pigeonhole principle]	84	4.5	p2
A and B and Inter								0						84	4.5	p2
Palindrome Trans								0					greedy, datastructures or dp	84		p2 p2
								0					greedy, impl, [reverse thinking]		4.5	
Marina and Vasya								0					greedy, constructive, [reverse thinking]	84	4.5	p1
Tennis Champion													greedy, math, [reverse thinking]	84	4.5	p1
Anya and Ghosts								0					greedy	84	4.5	
Terse princess	<u>CF148-D2-C</u>							0				Video Solution - Eng Mohamed Nasser	greedy, constructive	84	4.5	
Lucky Permutation								0					greedy, constructive	84	4.5	
Balls and Boxes	CF260-D2-C							0				Video Solution - Dr Mostafa Saad	greedy, impl	84	4.5	

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
	CF313-D2-C							0					greedy, constructive	84	5	
Upgrading Array	CF402-D2-D							0					greedy or dp	84	5	
	SRM456-D2-1000							0					greedy, math, binary search	84	5	р3
End of Exams	CF94-D2-D							0					greedy, math, impl	84	5	р3
Queue	CF141-D2-C							0					greedy, constructive	84	5	p2
	SGU 321							0				Sol	greedy, dfs , tree	84	5	p2
Dispute	CF242-D2-D							0					greedy, dfs or bfs, greedy	84	5	p2
	SRM292-D1-500							0					greedy, graph	84	5	p2
	CF1038-D2-D							0					greedy, impl	84	5	p2
	UVA 12325							0				Prove your Solution	greedy, knapsack, math	84	5	p2
	SRM405-D2-1000							0					greedy, math, strings	84	5	p2
Boring Partition	CF239-D2-D							0				Sol. Find proof (See editorial comments)	greedy, sortings	84	5	p2
No to Palindromes	s CF465-D2-C							0					greedy or bf	84	5	1
	CF709-D2-D							0					greedy, math or pattern or segment tree	84	5.5	р3
	CODECHEF BJUDGE							0					greedy, constructive	84	5.5	p3
	CF1023-D12-E							0					greedy, interactive, constructive	84	5.5	р3
Russian Roulette								0					greedy, math, adhoc	84	5.5	р3
	CF1043-D12-E							0					greedy, sort, prefix sum, [maybe solve srm		5.5	р3
DZY Loves Modifi								0				Prove	greedy or dp or datastructures	84	5.5	p2
BET EGVOC MOUNT	AtCoder002-AGC-C							0					greedy, datastructures, stl	84	5.5	p2
Of Zorcs and Ave	CF101149-GYM-G							0				Sol	greedy or dijkstra, [multiple start nodes]	84	5.5	p1
Robin Hood	CF672-D2-D							0				<u>561</u>	greedy, binary search, [strict time]	84	5.5	Pi
RODIII I I I I I	SRM453.5-D2-1000							0					greedy, math, sorting or dp	84	6	р3
	CF867-D12-E							0						84	6	p3
	SRM392-D1-1000							0					greedy, observations greedy, bf, mask, impl	84	6	p3 p2
Tennis Game	CF496-D2-D							0					greedy, bf, impl	84	6	pz
Wasted Time	CF127-D2-A							0						86	1.5	
								0				Video Calutian Caluanta ha (Java)	impl	86	1.5	
Juicer	CF709-D2-A							0				Video Solution - Solver to be (Java)	impl	86	1.5	
Anton and Polyhe								0				Video Solution - Solver to be (Java)	impl			
Valera and X	CF404-D2-A							0				Video Solution - Solver to be (Java)	impl, stl, set	86	1.5	
Tanya and Postca								0					impl	86	2	
Mike and Fun	<u>CF548-D2-B</u>							0					impl	86	2	
Covered Path	CF534-D2-B												impl	86	2	
Print Check	CF631-D2-B							0					impl	86	2	
Lucky Mask	<u>CF146-D2-B</u>							0					impl	86	2	-
Special Offer! Sup								0					impl	86	2	p2
Non-square Equa								0					impl	86	2	
Flag Day	<u>CF357-D2-B</u>							0					impl	86	2	
Sereja and Mirrori								0					impl	86	2	
Little Pony and So								0					impl	86	2	
MUH and Importa								0					impl	86	2	
Gena's Code	<u>CF614-D2-B</u>							0					impl	86	2	
Opposites Attract								0					impl	86	2	
Little Pigs and Wo								0					impl	86	2	
Cosmic Tables	<u>CF222-D2-B</u>							0					impl	86	2	
Prime Matrix	CF271-D2-B							0					impl	86	2	
Wet Shark and Bis	s <u>CF621-D2-B</u>							0				Video Solution - Eng Mahmoud Mabrok	impl	86	2	
	CF1030-D12-B							0					impl, math	86	2	
Facetook Priority	V <u>CF75-D2-B</u>							0					impl, sorting	86	2	
Queue	CF490-D2-B							0					graph, constructive, adhoc	86	3	p2
Hanoi Tower	TIMUS 1054							0				Sol	impl, recursion, tower of hanoi	86	3	p2

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
Treasure	CF495-D2-C							0					impl	86	4	
Game	CF69-D2-C							0					impl	86	4	
Accordian Patieno	UVA 127							0				Video Solution - Eng Moaz Rashad	impl	86	4	p1
Beautiful Sets of F	P CF268-D2-C							0					impl, constructive	86	4	
Appleman and To	a <u>CF462-D2-C</u>							0				Sol	impl, sorting, huffman coding	86	4	
Three Logos	CF581-D2-D							0					impl	86	4.5	p2
Guess Your Way	C CF507-D2-C							0				Video Solution - Dr Mostafa Saad	impl, math	86	4.5	p2
	CF1042-D12-D							0					impl or segment tree or bit	86	5	p2
Mafia	CF349-D2-C							0					impl, math	86	5	p2
Unusual Product								0					impl, math, [symbolic thinking]	86	5	p1
	CF101187-GYM-F							0				Sol	impl	86	5.25	-
Special Grid	CF435-D2-D							0				95.	impl, greedy	86	5.5	p2
Theatre Square	<u>CF1-D12-A</u>							0				Video Solution - Solver to be (Java)	math	87	1.5	PE
Tricatic Oquare	CF1204-D2-A							0				Video Solution - Dr Mostafa Saad	math, log, binary, pattern observation	87	2	p2
Balanced Rating (								0				Video Coldion Britinostala Cada		87	2	-
-								0				Find a formula	math, analysis	87	2	p3
	LIVEARCHIVE 2557							0					math or bf			p1
Product	UVA 10106											Video Solution - Eng Youssef El Ghareeb. Don't		87	2	
To Carry or not to								0				Sol	math	87	2	
Adding Reversed								0				Don't use big integer class. Write simple array co		87	2	
Dreamoon and W								0				<u>Video Solution - Eng Mohamed Adel</u>	math, combinatorics, bitmasks	87	2	р3
	<u>CF1051-D2-B</u>							0					math	87	2.5	
Escape	<u>CF148-D2-B</u>							0					math	87	2.5	
Restoring Painting	g <u>CF675-D2-B</u>							0					math	87	2.5	
Caisa and Pylons	CF463-D2-B							0				<u>Video Solution - Eng Muntaser Abukadeja</u>	math, impl	87	2.5	
T-primes	CF230-D2-B							0					math, numberr theory	87	2.5	
	CODECHEF GCDMOI	2						0				Sol usesint128 to avoid overflow	math,int128	87	3	p3
Polycarpus' Dice	<u>CF534-D2-C</u>							0				Sol	math, greedy, careful impl	87	3	p3
	CF1059-D2-C							0					math, constructive	87	4	р3
Number Sequenc	e <u>UVA 10706</u>							0					math	87	4	p2
Divisible by Sever	n <u>CF376-D2-C</u>							0					math, number theory	87	4	p2
Fractions Again?!	UVA 10976							0				Sol to read	math, number theory	87	4	p1
Plant	CF186-D2-C							0					math	87	4	
Magic Formulas	CF424-D2-C							0					math	87	4	
Duff in Love	CF588-D2-B							0					math	87	4	
Light, more light								0				Video Solution - Eng Amr Saud	math	87	4	
Power of Cryptog								0				-	math, log, [double limits]	87	4	р3
Round Table Knig								0					math or dp	87	4	Po
Lucky Permutation								0					math, constructive	87	4	
Vasya and Petya's								0					math, impl	87	4	p2
vasya and r ciya i	CF1239-D1-A							0					,	87	4.25	-
The 24222 2								0					math, pattern			-
The ? 1 ? 2 ? ?								0					math or binary search	87	4.5	p2
Secrets	<u>CF334-D2-C</u>											Video October October 1	math	87	4.5	
The Meaningless								0				Video Solution - Solver to be (Java)	math	87	4.5	
Find Maximum	CF353-D2-C							0					math, bits	87	4.5	
Plus and Square I								0					math, constructive	87	4.5	
Bear and Prime 1								0					math, constructive, interactive	87	4.5	
	CF1040-D2-D							0					math, randomization, binary search, intera		5	p4
Count Good Subs	st <u>CF451-D2-D</u>							0					math, adhoc, palyndromes, [short code]	87	5	р3
Tavas and Karafs	CF535-D2-C							0					math, binary search	87	5	p2
As Fast As Possib	OI <u>CF701-D2-D</u>							0					math, binary search, precision	87	5	p2
	CF955-D2-C							0					math, number theory	87	5	p2

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
	<u>CF45-D12-D</u>							0					math, randomization	87	5	p2
Ciel and Robot	<u>CF322-D2-C</u>							0					math, impl, [cases]	87	5	p1
Crazy Town	<u>CF499-D2-C</u>							0				Video Solution - Dr Mostafa Saad	math, number theory, greedy	87	5	p1
About Bacteria	CF199-D2-C							0					math	87	5	
DNA Alignment	CF520-D2-C							0					math	87	5	
Predict Outcome	o <u>CF451-D2-C</u>							0					math, equations, impl	87	5	p2
Analyzing Polyline	CF195-D2-D							0					math, sortings	87	5	
	CF1016-D12-D							0					math, xor, bitwise, constructive	87	5.25	р3
Quantity of Strings	s <u>CF151-D2-D</u>							0					math, repeated squaring, graph	87	5.5	p4
How many trees?	CF9-D2-D							0					math or dp_tree	87	5.5	p2
The Errant Physic	uVA 126							0				Sol	math	87	5.5	
Software CRC	UVA 128							0				Video Solution - Eng Moaz Rashad	math	87	5.5	
Jeff and Furik	CF352-D2-D							0				Sol	math or dp_expectation	87	6	р3
Magical Array	CF84-D2-B							0					math, combinatorics	89	2.5	
Chocolate	CF617-D2-B							0				Video Solution - Eng Yahia Ashraf	math, combinatorics	89	2.5	
Colorful Field	CF79-D12-B							0				Video Solution - Solver to be (Java)	math, mod	89	2.5	р3
The World is a Th								0				Video Solution - Eng Youssef Ali	math, combinatorics	89	4	ро
Pocket Book	<u>CF152-D2-C</u>							0				Video Solution - Eng Tousser Air	math, combinatorics	89	4	
Black and white p								0				Video Solution - Eng Amr Saud	math, combinatorics, counting	89	4	
black and write p								0				Video Solution - Eng Ami Saud				-2
	<u>CF758-D2-C</u>							0					math, combinatorics	89 89	5	p3
	CF459-D2-C							0					math, combinatorics, constructive			p3
	HACKR ajourney												math, combinatorics, first/last k digits 2^n,		5	p3
Shaass and Light								0				Video Solution - Dr Mostafa Saad	math, combinatorics	89	5.5	p4
	CF869-D2-C							0					math, combinatorics or dp_counting	89	5.5	р3
Tourist Problem	CF340-D2-C							0					math, combinatorics, impl	89	5.5	p1
Fox Dividing Chee								0				<u>Video Solution - Eng Abanob Ashraf</u>	math, factorial	94	2.5	
Permalex	<u>UVA 153</u>							0				Sol	math, factorial, permutations, dublicates, fa		4.5	p3
Prime Factors	<u>UVA 583</u>							0					math, factorization	95	2	
Easy Number Cha	a <u>CF236-D2-B</u>							0				Video Solution - Eng Yahia Ashraf	math, factorization	95	3	
Mr. Azad and his	S <u>UVA 10490</u>							0				Sol to read	math, factorization	95	3	
Prime Land	UVA 516							0					math, factorization	95	3	
Perfect P-th Powe	UVA 10622							0				Video Solution - Eng Moaz Rashad	math, factorization	95	4	p1
Factovisors	<u>UVA 10139</u>							0				Sol to read	math, factorization, primes, [factorize x!]	95	4	
	CF1047-D2-C							0					math, factorization	95	4.5	р3
DDF	UVA 547							0					math, factorization, divisors sum, multiview	95	4.5	
	UVA 10174							0					math, factorization, case analysis	95	5	
Multifactorials	UVA 11347							0					math, factorization, divisors sum	95	5	
	CF1033-D12-D							0					math, factorization	95	5.5	р3
Remainders Gam	€ CF688-D2-D							0					math, factorization, gcd, lcm, observations	95	6	p4
Primitive Root	SPOJ PROOT							0				Sol	math, factorization, primitve roots	95	6.25	
	UVA 12869							0				Sol	math, formula	98	5	p2
Combinations	UVA 369							0					math, gcd, comb formula	99	2	-
Pi	UVA 412							0				Video Solution - Eng Mohamed Adel	math, gcd	99	3	
Trains	CF88-D2-C							0				Video Solution - Solver to be (Java)	math, gcd or adhoc	99	4	
Mint	UVA 10717							0				Sol	math, gcd, lcm	99	4	
The Big Race	CF592-D2-C							0				<u>501</u>		99	4.5	р3
								0					math, gcd, lcm, [overflow]			μs
LCM Cardinality	UVA 10892							-					math, gcd, lcm	99	4.5	-2
Rational Resistan								0					math, gcd	99	5	р3
LCM Challenge	CF236-D2-C							0					math, gcd, lcm	99	5	-
	<u>CF1010-D1-C</u>							0					math, gcd, mod, number theory	99	5.5	p1
	AtCoder026-AGC-B							0				Sol	math, gcd, cases	99	6	p3

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
	SPOJ EASYMATH							0				Sol	math, inclusion-exclusion, lcm	101	3	
Hamburgers	CF371-D2-C							0					math, inclusion-exclusion, binary search	101	3	
The Lottery	UVA 10325							0				Video Solution - Eng Amr Bahaa [1]	math, inclusion-exclusion, gcd, overflow	101	4	
	CF101933-GYM-K							0				Sol	math, inclusion-exclusion	101	4	
	CF372-D1-B							0					math, inclusion-exclusion	101	5.75	p2
	SPOJ MSKYCODE							0				Sol	math, inclusion-exclusion	101	6	р3
	CF101992-GYM-D							0				Sol	math, inclusion-exclusion	101	6	p3
Equation	<u>UVA 727</u>							0					math, infix to postfix	102	4	
Farm	TIMUS 1349							0				Know Fermat's Last Theorem (Ignore proof)	math, math_adhoc, fermat last theorm	104	2	p2
Summation of Po	ly <u>UVA 10302</u>							0					math, math_adhoc, polynomials	104	2	
	HACKR tower-3-colorin							0				Learn Fermat's little theorem	math, math_adhoc, fermat little theorm	104	3	p1
R U Kidding Mr. F	F€ <u>UVA 10509</u>							0					math, math_adhoc, patterns	104	3.5	
Polly the Polynon	ni <u>UVA 498</u>							0					math, math_adhoc, polynomials	104	3.5	
Jzzhu and Seque	en <u>CF450-D2-B</u>							0					math, matrix, matrix exponient	105	2.5	
Mirror, Mirror	<u>UVA 466</u>							0					math, matrix, rotate, reflect, impl	105	3	p1
Clear Symmetry	<u>CF202-D2-C</u>							0					math, matrix, bf	105	4	
End of Fun	SPOJ DCEPC12E							0					math, matrix	105	4.5	
Uniform Generate	or <u>UVA 408</u>							0				Video Solution - Eng Yahia Ashraf	math, mod	109	3	
Be Efficient	<u>UVA 11155</u>							0					math, mod	109	5	
Quiz	CF337-D2-C							0					math, mod, pow, greedy	109	5.5	р3
Cows and Cars	UVA 10491							0				Revise Probability	math, probability, formula, fraction style	113	2	
What is the Proba	at <u>UVA 10056</u>							0				Sol	math, probability	113	3	
	HACKR sherlock-and-p							0				Sol	math, probability, fractions style	113	3	
Probability Given	UVA 11181							0				Sol	math, probability, conditional probability	113	4	p2
Another lottery	UVA 11628							0				Sol	math, probability, fraction style, gcd	113	4	
Mushroom Scient	tis <u>CF186-D2-D</u>							0					math, probability or log, ternary search	113	5	p4
	CF101864-GYM-A							0				Sol	math, probability, combinatorics, math	113	5	p2
	SRM537-D2-1000							0					math, probability, graph, cycle	113	5	p2
Airplane	UVA 12461							0				Sol	math, probability, greedy	113	5	p1
Probability	UVa 11346							0				Sol	math, probability, integration	113	5.25	р3
	SRM285-D1-500							0					math, probability, bf or dp	113	5.5	
	CF26-D12-D							0				Sol - must read	math, probability, factorial, logarithm, comb	oi 113	5.5	р3
	CF442-D1-B							0					math, probability, sorting	113	5.5	р3
	SRM352-D2-1000							0					math, probability, recursion, precision	113	5.5	
	CF513-D12-C							0				Sol	math, probability, bitmasks or dp_probabili	ty 113	6	р3
	UVA 557							0				Sol	math, probability, combinatronics	113	6	
	SPOJ FUNPROB							0				Sol	math, probability, formula	113	6	
	CF163-D12-C							0					math, probability	113	6.25	
	CF110-D2-D							0					math, probability, combinatorics	113	6.25	
God, Save me	UVA 10777							0				Sol	math, probability, expectation or dp_probal	b 114	4	
	SRM458-D2-500							0					math, probability, expectation, bitmasks	114	4	
	CF839-D2-C							0					math, probability, expectation, dfs	114	4	
	HACKR lazy-sorting							0				Revise Expected Value	math, probability, expectation, permutation	114	4	
Andrey and Probl	le <u>CF443-D2-D</u>							0				Sol	math, probability, expectation, greedy or d		4.5	р3
Wet Shark and FI								0					math, probability, expectation	114	4.5	T
Little Pony and E								0					math, probability, expectation, pattern	114	4.5	
	HACKR vertical-sticks							0					math, probability, expectation, linearity of e		5	р3
	SRM577-D1-250							0					math, probability, expectation, linearity of e		5	p3
	SRM470-D1-500							0					math, probability, expectation	114	5.5	p2
	CF500-D12-D							0					math, probability, expectation, dfs	114	5.5	p2
	CF280-D1-C							0					math, probability, expectation, dfs or dp	114	6	p3

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
Playlist	<u>CF268-D2-E</u>							0				Sol	math, probability, expectation, formula, gre-	114	6	р3
Big Mod	<u>UVA 374</u>							0					math, repeated squaring, mod, direct	115	3	
Twin Primes	UVA 10394							0					math, sieve	117	3	
Factorial Factors	UVA 884							0					math, sieve, factorization	117	3.5	
Psycho	SPOJ PSYCHON							0					math, sieve, factorization, tricky big # test of	117	4	p2
Summation of Fou	UVA 10168 [2]							0				Video Solution - Eng Moaz Rashad [3]	math, sieve	117	4	
Primes or Palindro	CF569-D2-C							0					math, sieve, palindromes	117	4.5	р3
Divisibility of Facto	UVA 10484							0				Sol to read	math, sieve	117	4.5	p2
-	LIVEARCHIVE 4008							0					math, sieve, [last non zero digit of permuta		5.5	p2
The New Rule in E								0				Sol	math, sieve, binary search	117	5.5	PE
Sum-up the Prime								0				Sol	math, sieve, dfs, dp	117	5.5	
Flying Saucer Seg								0				<u>561</u>	math, summations	118	4.5	р3
Dreamoon and Su								0				Video Solution - Dr Mostafa Saad		118	5	p3
Dieamoon and Su	CF201-D1-B							0				Video Solution - Di Mostala Saad	math, summations, [in my videos]		5	
0								0					math, summations, seperate summations of			p2
Spongebob and So								0					math, summations, bf, [overflow]	118	6	p2
	SPOJ HISTOGRA											Sol. Don't implement as adhock/greedy/Pure ST			4.5	p4
R2D2 and Droid A								0				Use rmq	rmq, binary search or bit or two pointers	122	5	р3
Friends and Subse								0					rmq, sparce table, binary search or datastr		5	р3
Pair of Numbers	<u>CF359-D2-D</u>							0				Sol	rmq, binary search, gcd, analysis or stack	122	5.5	p2
Square Subsets	CF448-D2-C							0					search, d&c, greedy	123	4.5	
Potentiometers	LIVEARCHIVE 2191							0					segment tree, [interval sum query]	125	2	p3
Interval Product	<u>UVA 12532</u>							0					segment tree or bit, [~=tju 3440]	125	2	
Halt The War	SPOJ CDC12_H							0					segment tree	125	3.5	
Multiples of 3	SPOJ MULTQ3							0				Sol	segment tree, lazy propagation	125	4	р3
Horrible Queries	SPOJ HORRIBLE							0					segment tree, lazy propagation or bit	125	4	p1
Counting Primes	SPOJ CNTPRIME							0					segment tree, sieve	125	4	p1
Maximum Sum	SPOJ KGSS							0					segment tree, [max pair sum]	125	4.5	p3
A Famous City	SPOJ CITY2							0				Sol	segment tree or adhoc	125	4.5	p2
Help R2-D2!	SPOJ HELPR2D2							0					segment tree, impl	125	4.5	p2
	SPOJ LITE							0					segment tree, lazy propagation, [edu]	125	4.5	p1
Circular RMQ	CF52-D12-C							0					segment tree, lazy propagation, circular	125	4.5	P1
Brackets	SPOJ BRCKTS							0				Sol	segment tree, [bracket balance, 2 values in		5	р3
Can you answer th								0				Sol	segment tree, [max sum, part of gss series		5	р3
								0								
	UVA 12299							0				See sscanf and sprintf usage	segment tree, rmq shift	125	5	p3
AND Rounds	SPOJ ANDROUND							0				Sol	segment tree	125	5	p2
	UVA 11402											Sol	segment tree, lazy propagation or datastru		5	p2
Present	<u>CF460-D2-C</u>							0					segment tree, lazy propagation, greedy or		5	p2
Fence Obstacle Co								0				Sol	segment tree, dp or dp	125	5	p1
	<u>CF61-D2-E</u>							0					segment tree or wavelet tree, [boring, inver	125	5	p1
Can you answer th								0					segment tree, [max sum+updates, spoj gss		5.5	p5
Sum of Squares w	SPOJ SEGSQRSS							0				Sol	segment tree, lazy propagation, impl, [weal	125	5.5	p4
	CF380-D1-C							0					segment tree, [~=spoj gss5], [spoj gss1]	125	5.5	р3
Can you answer th	SPOJ GSS4							0				Sol	segment tree or bit, [classical]	125	5.5	p2
SKYLINE	<u>UVA 1232</u>							0				Sol	segment tree, [skyline overlap, tle]	125	5.5	
Ordering the Soldi	SPOJ ORDERS							0				Sol	segment tree, kth element or bit or bst or tr	125	5.75	р3
	SPOJ IOPC1207							0				Sol	segment tree, lazy propagation, [handle dir	125	6	р3
	SPOJ BRCKTS2							0				Sol	segment tree, prefix sums or adhoc, recurs		6	p3
Bookworm	TIMUS 1638							0				Can you get AC first submission	simulation, formula, [was, tricky]	126	2	p2
Taxi	TIMUS 1607							0				Can you get AC first submission?	simulation, tricky	126	2	p1
The Blocks Proble								0				Sol [4]	simulation	126	3	Α.
Oulipo	PKU 3461							0				55.[1]	string processing, kmp, [count word freque		2	

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	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
A Needle in the H	a <u>SPOJ NHAY</u>							0					string processing, kmp, [find words position	130	3	
Finding the Tesse	r <u>SPOJ TESSER</u>							0					string processing, kmp	130	4	p4
Period	SPOJ PERIOD							0					string processing, kmp, period max or suffix	130	4.5	p3
Prefixes and Suffi	x <u>CF432-D2-D</u>							0					string processing, kmp or z-function	130	5	p3
Tavas and Maleka	CF535-D2-D							0					string processing, kmp or z-function, [~cf12	130	5	p3
	<u>CF1147-D1-B</u>							0					string processing, kmp	130	5.25	p2
Messenger	CF631-D2-D							0					string processing, kmp	130	5.5	р3
	CF1138-D2-D							0					string processing, kmp	130	5.5	p2
	FbHkrCup 18-RQ-C							0					string processing, kmp	130	5.5	p1
	UVA 11475							0				Sol	string processing, kmp	130	5.5	
Phone List	SPOJ PHONELST							0					string processing, trie	135	3.5	
Cellphone Typing	<u>UVA 12526</u>							0					string processing, trie	135	4.5	р3
Disk Tree	<u>UVA 1556</u>							0					string processing, trie, trie using map, prett	135	4.5	р3
Search in the dict	ic <u>SPOJ DICT</u>							0					string processing, trie	135	4.5	p2
Vasiliy's Multiset	<u>CF706-D2-D</u>							0					string processing, trie	135	5	p2
	LiveArchive 8015							0				Sol	string processing, trie	135	5.25	5 p4
	CF842-D2-D							0					string processing, trie, [xor]	135	5.5	р3
	CF665-D12-E							0					string processing, trie	135	5.5	р3
	LiveArchive 4682							0				Sol	string processing, trie	135	5.5	
	CF455-D1-B							0					string processing, trie	135	5.5	
Spider's Web	CF216-D2-D							0					two pointers or adhoc	138	3	
Points on Line	CF252-D2-C							0					two pointers or binary search, combinatoric	138	4	p2
Hometask	CF155-D2-C							0					two pointers or dp	138	4.5	
	CF1043-D12-D							0					two pointers, [different solutions]	138	5	р3
	CODECHEF REDCGA	AI.						0					two pointers	138	5	p2
Sereja ans Anagra	a CF368-D2-D							0				Sol	two pointers or adhoc or kmp-like	138	5	p2
Vasya and String	CF676-D2-C							0					two pointers	138	5	
To Add or Not to A	CF231-D2-C							0					two pointers, binary search	138	5	
Two Strings	CF224-D2-D							0				Sol	two pointers	138	5.5	р3
Chips	CF334-D2-D							0					two pointers or adhoc	138	5.5	p2
·	CF309-D12-B							0					two pointers, dp or greedy	138	5.5	p2
Maximum Xor Se								0					two pointers or segment tree	138	5.5	-
						Caregory C	Code to ma	tch with	Col O	Learning C	Order	Video				
1- Column K (lear	ning order) is same									1		Watch - Approaching Problem Statement				
order as the shee										2		Watch - Thinking - On papers Not on PC				
2- You may follow	this order to learn									3		Watch - Measuring Algorithms Perfromance	<u>-1</u>			
	e category code as in									4		Watch - Elementary Math - Introduction				
Column O	earned DFS. Codes for					109				5		Watch - Number Theory - Modular Arithmatic	c			
	Go and solve as u want					89, 101				6		Watch - Combinatorics - Counting Principles				
	with these codes. E.g.									7		Watch - Graph Theory - Intro				
UVA 10461						60,61,63				8		Watch - Graph Theory - DFS				
						45				9		Watch - Computational Geometry - Intro				
						45				10		Watch - Computational Geometry - Point and	d Vector			
						6				11		Watch - Search Techniques - Binary Search				
										12		Watch - Thinking - Problem Simplification				
										13		Watch - Thinking - Brainstorm - Rank - Appr	oach			
										14		Study STL				
												-				
						89 101				15		Watch - Combinatorics - Permutations and C	Combinations - 1			
						89, 101 89, 101				15 16		Watch - Combinatorics - Permutations and C Watch - Combinatorics - Permutations and C				

ff	Problem Code	Status	Submit Count	Reading Time(m)	Thinking Time(m)	Coding Time(m)	Debug Time(m)	Total Time(m)	Problem Level /10	By yourself?	Category	1-2 line Comments about your approach is interesting?	Mostafa Category	Category Code	Level Qual	lity
	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0				
										18		Watch - Training-Secrets of Success				
						99				19		Watch - Number Theory - Fib, GCD, LCM, Pow				
										20		Watch - Prefix Sum				
						57				21		Watch - Graph Theory - BFS				
										22		Review - Recursion				
						10				23		Watch - DP - intro 1				
						10				24		Watch - DP - intro 2				
						45				25		Watch - Computational Geometry - Complex Nu				
						48				26		Watch - Computational Geometry - Lines and D	<u>Distances</u>			
										27		Watch - Focused and Diffused Thinking				
						65,76				28		Watch - Graph Theory - MST - Kruskal				
						84				29		Watch - Intro to Greedy				
										30		Watch - Thinking - Concretely - Symbolically - F	<u>Pictorially</u>			
										31		Watch - Thinking - Problem Constraints				
						117				32		Watch - Number Theory - Primes				
										33		Watch - Algebra - Number Bases and Polynomi	<u>als</u>			
										34		Watch - Algebra - Patterns in Sequences				
						118				35		Watch - Algebra - Summations				
										36		Watch - Algebra - Basic Matrix Operations				
										37		Watch - Thinking - Problem Abstraction				
										38		Watch - Thinking - Problem Reverse				
						3				39		Watch - Search Techniques - Backtracking				
										40		Review bitmasking				
						10				41		Watch - DP - Subset Style				
						32				42		Watch - DP - Consecutive Ranges Style				
						32				43		Watch - DP - Nested Ranges Style				
						32				44		Watch - DP - General Ranges Style				
										45		Watch - Thinking - Incrementally				
						05				46		Watch - Thinking - Problem Domain re-interpret	tation			
						95				47		Watch - Number Theory - Factorization				
						113				48		Watch - Probability - First 9 videos				
										49		Watch - Thinking - Search Space and Output An	naiysis			
						44				50		Watch - Thinking - Observations Discovery				
						41				51		Watch - Game Theory - Intro	luaniama atatian			
						64				52 53		Watch - Thinking - Misc - Solution Verification - Watch - Graph Theory - Dijkstra	· implementation			
						48				54		Watch - Computational Geometry - Lines Inters	ections			
						47				55		Watch - Computational Geometry - Lines Inters  Watch - Computational Geometry - Circles	1000018			
						-11				56		Watch - Thinking - Error Inspection - History - C	Contest Strategy			
						15				57		Watch - Thinking - Error inspection - History - C	Joniest Strategy			
						18				58		Watch - DP - Counting				
						.0				59		Watch - Thinking - Let's Put All Together				
						37				60		Watch - DP - Table Method				
						68				61		Watch - Graph Theory - Floyd Warshal				
						30				62		Watch - Measuring Algorithms Perfromance - 2				
						62				63		Watch - Graph Theory - Tree Diameter and Ison				
						114				64		Watch - Graph Theory - Tree Diameter and Ison Watch Video - Expected Value	norphilatii			
						122, 125				65		Watch - Data Structures - Segment Tree (2 vid)				
						38				66		Reading: DP on Trees				
						138				67		Watch - Two pointers technique				
						29				68		Watch - DP - Probability				

ff	Problem Code	Status	Submit Count	Reading Time(m)	Thinking Time(m)	Coding Time(m)	Debug Time(m)	Total Time(m)	Problem Level /10	By yourself?	Category	1-2 line Comments about your approach is interesting?	Mostafa Category	Category Code	Level Quality
	AC Averages =>	0	0	0	0	0	0	0	0	0	0	0			
						11				69		Watch - DP - Masks (2 vid)			
						135				70		Watch - String Processing - Trie			
						36				71		Watch - DP - Sub-rectangle style			
						130				72		Watch - String Processing - KMP (2 vid)			
						23				73		Watch - DP - Games (2 vid)			
						49				74		Watch - Computational Geometry - Simple an	d Convex Polygons		
						49				75		Watch - Computational Geometry - Polygon A	rea - Centroid - Cut		
						49				76		Watch - Computational Geometry - Point in po	olygon		
						71,72,74				77		Watch - Graph Theory - Maximum Flow (2 vid	1		
						77				78		Watch - Graph Theory - SCC (2 vid)			

[1] Or shorter:

https://github.com/ilyesLtifi/Competitive-Programming/blob/master/UVA/UVA%2010325.cpp

[2] Google first Goldbach's conjecture

[3] Or shorter: http://naivered.github.io/2016/07/03/Problem\_Solving/UVa/UVa-10168-Summation-of-Four-Primes/

## [4] Summary

This is a simple Simulation problem. There should be more than enough time to pass.

## Explanation

Things to think about include deciding what data structure to use and how to find where each block is. Since the main operations are deletion, insertion, and splicing, linked lists are a good choice. You can also use a lookup table for keeping track of where each block is, as long as you update it for each operation.

In this problem using modularity really helps; create a function for each of the different move/pile operations and one other for printing. This way you can make sure each of the individual operations is done correctly instead of trying to find a bug amongst your whole program.

## Gotchas

Illegal commands are to be ignored:

Those where a = b.

Those with a and b in the same stack.

The problem statement is incorrect - to avoid Presentation Error, there is no space before the single-digit numbers: check the below output.