

## **Competitive Programming**







## Methods to Solve (2000-present)

Use these filters to narrow down your next problem to solve:

OJ: Both 🕶 , Topic: Chapter 5 💌 , Quality: Starred 🕶

Online Judge shown: Both

Problem topics shown: Chapter 5: Mathematics only

Problem Quality: Starred

Number of problems shown (initially in CP4 order): 216

Information is up to date as of 10 February 2022

You can now sort these problems based on Distinct ACcepted Users (DACU) column.

Generally, problems with high DACU are the easier problems.

Note that we only update DACU column manually (not a live data).

Note: Column Point is only relevant for Kattis online judge.

Show All • entries		Search:
Both OJ	Problem Title	CP4
10751	Chessboard  Chessboard	5.2a, Finding Formula, Easier
12004	Bubble Sort	5.2a, Finding Formula, Easier
12918	Lucky Thief	5.2a, Finding Formula, Easier

Both OJ	Problem Title	CP4
averageshard	<u>averageshard</u>	5.2a, Finding Formula, Easier
bishops	<u>bishops</u>	5.2a, Finding Formula, Easier
crne	<u>crne</u>	5.2a, Finding Formula, Easier
twostones	<u>twostones</u>	5.2a, Finding Formula, Easier
10161	Ant on a Chessboard	5.2b, Finding Formula, Harder
11038	How Many O's?	5.2b, Finding Formula, Harder
11231	Black and white painting	5.2b, Finding Formula, Harder
11718	Fantasy of a Summation	5.2b, Finding Formula, Harder
mortgage	<u>mortgage</u>	5.2b, Finding Formula, Harder
neighborhoodwatch	<u>neighborhoodwatch</u>	5.2b, Finding Formula, Harder
nine	<u>nine</u>	5.2b, Finding Formula, Harder
00343	What Base Is This?	5.2c, Base Number Conversion
00389	Basically Speaking	5.2c, Base Number Conversion
11952	Arithmetic Arithmetic	5.2c, Base Number Conversion
allaboutthatbase	<u>allaboutthatbase</u>	5.2c, Base Number Conversion
arithmetic	<u>arithmetic</u>	5.2c, Base Number Conversion
basicremains	<u>basicremains</u>	5.2c, Base Number Conversion
oktalni	<u>oktalni</u>	5.2c, Base Number Conversion
00377	Cowculations Constitutions	5.2d, Base Number Variants
00575	Skew Binary	5.2d, Base Number Variants
10931	Online Judge Parity	5.2d, Base Number Variants
11121	online Judge Base -2	5.2d, Base Number Variants
aliennumbers	<u>aliennumbers</u>	5.2d, Base Number Variants
ignore	ignore ignore	5.2d, Base Number Variants

Both OJ	Problem Title	CP4
mixedbasearithmetic	<u>mixedbasearithmetic</u>	5.2d, Base Number Variants
00443	Humble Numbers	5.2e, Number Systems/Seqs
10408	Farey sequences	5.2e, Number Systems/Seqs
11970	Lucky Numbers	5.2e, Number Systems/Seqs
candlebox	<u>candlebox</u>	5.2e, Number Systems/Seqs
collatz	<u>collatz</u>	5.2e, Number Systems/Seqs
permutedarithmeticsequence	permutedarithmeticsequence	5.2e, Number Systems/Seqs
rationalsequence	<u>rationalsequence</u>	5.2e, Number Systems/Seqs
00701	The Archeologists' Dilemma	5.2f, Log, Exp, Pow
11384	Help is needed for Dexter	5.2f, Log, Exp, Pow
11847	Cut the Silver Bar	5.2f, Log, Exp, Pow
12416	Excessive Space Remover	5.2f, Log, Exp, Pow
cokolada	<u>cokolada</u>	5.2f, Log, Exp, Pow
factstone	<u>factstone</u>	5.2f, Log, Exp, Pow
thebackslashproblem	<u>thebackslashproblem</u>	5.2f, Log, Exp, Pow
00264	Count on Cantor	5.2g, Grid
10022	Delta-wave	5.2g, Grid
10182	Bee Maja	5.2g, Grid
10233	Dermuba Triangle	5.2g, Grid
beehouseperimeter	<u>beehouseperimeter</u>	5.2g, Grid
honeyheist	<u>honeyheist</u>	5.2g, Grid
maptiles2	<u>maptiles2</u>	5.2g, Grid
00930	Polynomial Roots	5.2h, Polynomial
10268	Online Judge 498-bis	5.2h, Polynomial

Both OJ	Problem Title	CP4
10302	Summation of Polynomials	5.2h, Polynomial
10586	Polynomial Remains	5.2h, Polynomial
ada	<u>ada</u>	5.2h, Polynomial
curvyblocks	<u>curvyblocks</u>	5.2h, Polynomial
plot	<u>plot</u>	5.2h, Polynomial
00332	Rational Numbers from Repe	5.2i, Fractions
00834	Continued Fractions	5.2i, Fractions
12068	Harmonic Mean	5.2i, Fractions
deadfraction	<u>deadfraction</u>	5.2i, Fractions
fraction	<u>fraction</u>	5.2i, Fractions
mixedfractions	<u>mixedfractions</u>	5.2i, Fractions
thermostat	<u>thermostat</u>	5.2i, Fractions
00496	Simply Subsets	5.2j, Really Ad Hoc
11241	Humidex	5.2j, Really Ad Hoc
11526	Online Judge H(n).	5.2j, Really Ad Hoc
12036	Stable Grid	5.2j, Really Ad Hoc
matrix	<u>matrix</u>	5.2j, Really Ad Hoc
trip	<u> trip</u>	5.2j, Really Ad Hoc
yoda	<u>yoda</u>	5.2j, Really Ad Hoc
00543	Goldbach's Conjecture	5.3a, Prime Numbers
01644	Prime Gap	5.3a, Prime Numbers
10650	Determinate Prime	5.3a, Prime Numbers
11752	The Super Powers	5.3a, Prime Numbers
enlarginghashtables	enlarginghashtables enlarginghashtables	5.3a, Prime Numbers

Both OJ	Problem Title	CP4
primesieve	primesieve	5.3a, Prime Numbers
reseto	<u>reseto</u>	5.3a, Prime Numbers
01180	Perfect Numbers	5.3b, (Prob) Prime Testing
01210	Sum of Consecutive Prime N	5.3b, (Prob) Prime Testing
10235	Simply Emirp	5.3b, (Prob) Prime Testing
flowergarden	<u> flowergarden</u>	5.3b, (Prob) Prime Testing
goldbach2	goldbach2	5.3b, (Prob) Prime Testing
primes2	primes2	5.3b, (Prob) Prime Testing
pseudoprime	<u>pseudoprime</u>	5.3b, (Prob) Prime Testing
00583	Prime Factors	5.3c, Finding Prime Factors
11466	Largest Prime Divisor	5.3c, Finding Prime Factors
12703	Collina Judge Little Rakin	5.3c, Finding Prime Factors
12805	Raiders of the Lost Sign	5.3c, Finding Prime Factors
pascal	<u>pascal</u>	5.3c, Finding Prime Factors
primalrepresentation	<u>primalrepresentation</u>	5.3c, Finding Prime Factors
primereduction	<u>primereduction</u>	5.3c, Finding Prime Factors
00294	Divisors Divisors	5.3d, Prime Factors Functions
10179	Irreducable Basic Fraction	5.3d, Prime Factors Functions
11353	A Different Kind of Sortin	5.3d, Prime Factors Functions
11728	Alternate Task	5.3d, Prime Factors Functions
almostperfect	<u>almostperfect</u>	5.3d, Prime Factors Functions
divisors	<u>divisors</u>	5.3d, Prime Factors Functions
relatives	<u>relatives</u>	5.3d, Prime Factors Functions
10699	Count the factors	5.3e, Modified Sieve

Both OJ	Problem Title	CP4
10990	Another New Function	5.3e, Modified Sieve
11426	GCD - Extreme (II)	5.3e, Modified Sieve
12043	Divisors Online Judge	5.3e, Modified Sieve
data	<u>Mata</u>	5.3e, Modified Sieve
farey	<u>farey</u>	5.3e, Modified Sieve
nonprimefactors	<u>nonprimefactors</u>	5.3e, Modified Sieve
10407	Simple division	5.3f, GCD and/or LCM
10892	LCM Cardinality	5.3f, GCD and/or LCM
11388	GCD LCM	5.3f, GCD and/or LCM
11417	GCD GCD	5.3f, GCD and/or LCM
jackpot	<u>jackpot</u>	5.3f, GCD and/or LCM
prsteni	<u>prsteni</u>	5.3f, GCD and/or LCM
smallestmultiple	<u>smallestmultiple</u>	5.3f, GCD and/or LCM
11076	Add Again	5.3g, Factorial
12335	Lexicographic Order	5.3g, Factorial
12869	Zeroes Zeroes	5.3g, Factorial
inversefactorial	<u>inversefactorial</u>	5.3g, Factorial
loworderzeros	<u>loworderzeros</u>	5.3g, Factorial
namethatpermutation	<u>namethatpermutation</u>	5.3g, Factorial
tutorial	<u>tutorial</u>	5.3g, Factorial
10680	Online Judge LCM	5.3h, Working with PFs
11347	Multifactorials  Online Judge	5.3h, Working with PFs
11395	Sigma Function	5.3h, Working with PFs
consecutivesums	<u>consecutivesums</u>	5.3h, Working with PFs

Both OJ	Problem Title	CP4
factovisors	factovisors	5.3h, Working with PFs
fundamentalneighbors	<u>fundamentalneighbors</u>	5.3h, Working with PFs
iks	iks iks	5.3h, Working with PFs
10174	Couple-Bachelor-Spinster N	5.3i, Modular Arithmetic
10176	Ocean Deep! - Make it shal	5.3i, Modular Arithmetic
10212	The Last Non-zero Digit.	5.3i, Modular Arithmetic
10489	Boxes of Chocolates	5.3i, Modular Arithmetic
anothercandies	<u>anothercandies</u>	5.3i, Modular Arithmetic
ones	<u>ones</u>	5.3i, Modular Arithmetic
threedigits	<u>threedigits</u>	5.3i, Modular Arithmetic
10090	Online Judge Marbles	5.3j, Extended Euclid
10104	Euclid Problem	5.3j, Extended Euclid
10633	Rare Easy Problem	5.3j, Extended Euclid
10673	Play with Floor and Ceil	5.3j, Extended Euclid
candydistribution	<u>candydistribution</u>	5.3j, Extended Euclid
modulararithmetic	<u>modulararithmetic</u>	5.3j, Extended Euclid
soyoulikeyourfoodhot	<u>soyoulikeyourfoodhot</u>	5.3j, Extended Euclid
10922	2 the 9s	5.3k, Divisibility Test
10929	You can say 11	5.3k, Divisibility Test
11344	The Huge One	5.3k, Divisibility Test
11371	Number Theory for Newbies  Online Judge	5.3k, Divisibility Test
divisible	<u>divisible</u>	5.3k, Divisibility Test
meowfactor	<u>meowfactor</u>	5.3k, Divisibility Test
thinkingofanumber	<u>thinkingofanumber</u>	5.3k, Divisibility Test

Both OJ	Problem Title	CP4
00495	Fibonacci Freeze	5.4a, Fibonacci Numbers
00763	Fibinary Numbers	5.4a, Fibonacci Numbers
10334	Ray Through Glasses	5.4a, Fibonacci Numbers
10689	Yet another Number Sequenc	5.4a, Fibonacci Numbers
anti11	anti11	5.4a, Fibonacci Numbers
batmanacci	<u>batmanacci</u>	5.4a, Fibonacci Numbers
rijeci	<u>rijeci</u>	5.4a, Fibonacci Numbers
00369	Combinations Combinations	5.4b, Binomial Coefficients
10541	Stripe	5.4b, Binomial Coefficients
11955	Binomial Theorem	5.4b, Binomial Coefficients
12712	Pattern Locker	5.4b, Binomial Coefficients
election	<u>election</u>	5.4b, Binomial Coefficients
lockedtreasure	<u>lockedtreasure</u>	5.4b, Binomial Coefficients
oddbinom	oddbinom oddbinom	5.4b, Binomial Coefficients
00991	Safe Salutations	5.4c, Catalan Numbers
10007	Count the Trees	5.4c, Catalan Numbers
10223	How many nodes ?	5.4c, Catalan Numbers
10312	Expression Bracketing	5.4c, Catalan Numbers
catalan	<u>Satalan</u>	5.4c, Catalan Numbers
catalansquare	<u>catalansquare</u>	5.4c, Catalan Numbers
fiat	<b>Mat</b> Siat	5.4c, Catalan Numbers
11310	Delivery Debacle	5.4d, Others, Easier
11401	Triangle Counting	5.4d, Others, Easier
11597	Spanning Subtree	5.4d, Others, Easier

Both OJ	Problem Title	CP4
12463	Little Nephew	5.4d, Others, Easier
character	<u>character</u>	5.4d, Others, Easier
honey	<u>honey</u>	5.4d, Others, Easier
integerdivision	<u>integerdivision</u>	5.4d, Others, Easier
01224	Tile Code	5.4e, Others, Harder
10784	Diagonal	5.4e, Others, Harder
11069	A Graph Problem	5.4e, Others, Harder
11538	Chess Queen	5.4e, Others, Harder
anagramcounting	<u>anagramcounting</u>	5.4e, Others, Harder
incognito	<u>incognito</u>	5.4e, Others, Harder
tritiling	<u>tritiling</u>	5.4e, Others, Harder
01636	Headshot	5.5a, Probability, Easier
10238	Throw the Dice	5.5a, Probability, Easier
10491	Cows and Cars	5.5a, Probability, Easier
11181	Probability Given	5.5a, Probability, Easier
bobby	<u>bobby</u>	5.5a, Probability, Easier
dicebetting	<u>dicebetting</u>	5.5a, Probability, Easier
odds	odds odds	5.5a, Probability, Easier
10056	What is the Probability?	5.5b, Probability, Harder
10648	Chocolate Box	5.5b, Probability, Harder
11176	Winning Streak  Online Judge	5.5b, Probability, Harder
11628	Another lottery	5.5b, Probability, Harder
anthony	<u>anthony</u>	5.5b, Probability, Harder
goodcoalition	<b>goodcoalition</b>	5.5b, Probability, Harder

Both OJ	Problem Title	CP4
lostinthewoods	<u>lostinthewoods</u>	5.5b, Probability, Harder
00350	Pseudo-Random Numbers	5.6a, Cycle Finding
11036	Eventually Periodic Sequen	5.6a, Cycle Finding
11053	Flavius Josephus Reloaded	5.6a, Cycle Finding
11511	Frieze Patterns	5.6a, Cycle Finding
fibonaccicycles	fibonaccicycles	5.6a, Cycle Finding
rats	<u>rats</u>	5.6a, Cycle Finding
10111	Find the Winning Move	5.7a, Game Theory (Basic)
10536	Game of Euler	5.7a, Game Theory (Basic)
11489	Integer Game	5.7a, Game Theory (Basic)
bachetsgame	<u>bachetsgame</u>	5.7a, Game Theory (Basic)
blockgame2	blockgame2	5.7a, Game Theory (Basic)
euclidsgame	<u>euclidsgame</u>	5.7a, Game Theory (Basic)
linije	<u>linije</u>	5.7a, Game Theory (Basic)
10229	Modular Fibonacci	5.8a, Matrix Power
10655	Contemplation! Algebra	5.8a, Matrix Power
11582	Colossal Fibonacci Numbers	5.8a, Matrix Power
12796	Teletransport	5.8a, Matrix Power
checkingforcorrectness	<u>checkingforcorrectness</u>	5.8a, Matrix Power
porpoises	<u>porpoises</u>	5.8a, Matrix Power
squawk	<u>squawk</u>	5.8a, Matrix Power
Showing 1 to 216 of 216 entries	First	Previous 1 Next Last

## **Partner Links**

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