

PANFOPCWHTTAPA 2!

(Picking A Name For Our Puzzle Contest Was Harder Than The Actual Puzzles Are- Part 2)

David Altizio, Priyam Bhushan, Jacob Cohen, Botaku

28th January to 1st February 2022



We couldn't make
a logo either!

Important Links

Submission Page : <https://logicmastersindia.com/live/?contest=M202201P>

Discussion Thread : <http://logicmastersindia.com/t/?tid=3002>

F. A. Q. : <http://logicmastersindia.com/t/?tid=2773>

Registration, if required : <http://logicmastersindia.com/register.asp>

Introduction

Hello! We are **David Altizio** (djmathman), **Priyam Bhushan** (punchingcatto), **Jacob Cohen** (Conflux), and **Botaku** (Botaku), four passionate puzzlers from the Cracking the Cryptic discord server, and we are back with the second edition of our contest!

Logic puzzles have experienced a renaissance during the COVID pandemic as a recreational tool to distract us from the outside world. One of the biggest reasons for the increase in popularity has been the Cracking the Cryptic Youtube channel, which went viral with a few videos on amazing puzzles and has been responsible for the evolution of the Sudoku meta. (One of the authors of this contest, David, specifically credits his interest in logic puzzles to one of these videos.) However, this resurgence has primarily focused on Sudoku puzzles; while a Sudoku grid is a canvas for endless creativity, there are many other genres of puzzles that don't get the spotlight they deserve. Thus, we bring to you PANFOPCWHTTAPA -- a series of contests designed to ease solvers into just a few of the many logic puzzle genres out there.

Our goal is two-fold. First, we aim to introduce solvers to the different types of genres often found in puzzle contests. We carefully chose the puzzle genres to present in this first contest to introduce a wide range of puzzle categories (loops, lines, shading, object placement, and number placement). Second, we hope to allow solvers to become comfortable with the genres at play in a short time window. Thus, each genre has three puzzles associated with it, in (roughly) increasing order of difficulty. Our aim is to construct puzzles that are both engaging and fair to newer solvers.

There are two ways you can solve the puzzles in this contest. One way is to print the puzzles on paper and solve with pencil and paper. However, for those who prefer computer software or don't have access to a printer, we have an online solving option with **Penpa!** Each puzzle will have a full solvable penpa version on the website, designed to replicate the paper-solving experience. More details will follow in this IB.

If you have any questions, do not hesitate to contact us through the LMI forums. We hope you enjoy the puzzles we have to offer!

About this Contest

This episode has 15 Puzzles from the following puzzle types:

- 3* Hidato
- 3* Slitherlink
- 3* Statue Park
- 3* Star Battle
- 3* Nurikabe

How to participate?

- Understand the rules of different puzzles that will appear in this contest. This Instruction Booklet has rules for each puzzle.
- Download the password protected Puzzle booklet (will be uploaded before the test starts). The Puzzle booklet contains the actual Puzzles to be solved. It is password protected, so you won't be able to open it.
- Any time on or after 28th January Indian Standard Time (but on or before 1st February), login at the submission page using your LMI user-id and password. Please check the submission page for exact timing.
- Click on "Start". At this time, password for pdf will be shown and timer will start. **The contest duration is 60 minutes.**
- The puzzle booklet can be downloaded, printed and solved on paper. We advise you to have a printer accessible with enough paper, if possible.
- Outside solving help of any kind is not permitted. This includes but is not limited to: assistance of any kind from any other person, prepared notes, books, calculators, computers, or tools other than items explicitly permitted.
- You are allowed to use writing implements, eraser, blank paper (including commercial graph paper), ruler, scissors, and tape.

If you are participating at LMI for first time, you must check the F.A.Q. at <http://logicmastersindia.com/t/?tid=2773>.

About answer keys and Submission

- Each puzzle has some answer keys, as described in the instructions.
- After solving the puzzle, you need to submit the puzzle using the answer keys.
- You may submit the answer keys anytime during the test duration. You may consider submitting a puzzle as soon as you solve it.
- Answer keys are always to be entered from left to right or top to bottom
- Don't enter any separator unless specified in the answer key
- If one row and one column is marked, enter the row first and then the column
- If multiple rows are marked, enter from top to bottom for marked rows
- If multiple columns are marked, enter from left to right for marked columns
- If horizontal and vertical keys are needed, first enter the horizontal and then the vertical
- Uppercase or lower case of answer key does not matter
- Characters other than the ones explicitly expected by the answer key will cause the red highlight to appear around the submission box.

Points Table and Scoring

Points typically indicate difficulty of the puzzles and time required to solve them. You will get full points if you enter the correct answer key. While the organizers have made best efforts to match them, your personal experience and preference may differ.

Hidato	4,5,9
Slitherlink	5,6,10
Statue Park	5,7,9
Star Battle	5,7,9
Nurikabe	4,6,9

This test uses instant grading where a solver can submit any individual puzzle and receive confirmation that the solution is correct or not. Each incorrect submission reduces the puzzle's potential score. The first, second, third, and fourth incorrect submissions reduce the potential score to 90%, 70%, 40%, and 0% respectively. A demonstration for this is shown below.

Original points

04 Araf	50 points	4A	Sum should be 10
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Potential points after 1 incorrect submission

04 Araf	45 / 50	4A	1234
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Potential points after 2 incorrect submissions

04 Araf	35 / 50	4A	23311
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Potential points after 3 incorrect submissions

04 Araf	20 / 50	4A	1111111111
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Potential points after 4 incorrect submissions

04 Araf	0 / 50	4A	541
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Bonus and Ranking

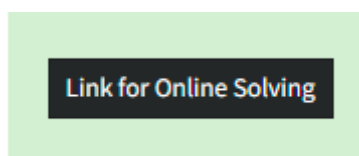
If you submitted all Puzzles correctly, you can have bonus points. You will earn 1 point per minute saved, computed up to seconds.

Ranking will be based on following rules in order:

1. Most total points
2. Earliest final submission time, up to seconds (ignoring incorrect submissions)

Penpa Usage

This contest will also be solvable on the Penpa-Edit software. **Please note that the LMI website has seen some changes since part 1 of this contest. The Penpa software is now integrated into the main contest page, instead of being linked under each puzzle.** If you choose to solve the puzzles online, click the button for the same (shown below) when you start the contest.



The editor DOES NOT have a solution enabled so it will not check a solution. Participants must submit the answer key codes as they would with paper solving; these answer key forms will appear below the grid. After solving the puzzle, you use boxes at the bottom to submit the puzzle.

03. Mini Classic Sudoku	1 points	E	6 digits	F	6 digits	Submit
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To practice on the editor, we have given links for solving the example puzzles.
To understand the online solving interface, and get a bit of practice, read the FAQ here:
<https://www.logicmastersindia.com/live/faq-onlinesolving.asp>

Credits

- **Lavaloid**, **TostCronch** and **Rachel Rosner** for test solving the puzzles and providing invaluable feedback.
- History of the various puzzle types adapted from www.hidato.com/, <https://en.wikipedia.org/>, <https://www.gmpuzzles.com/>, <https://www.janko.at/>, <https://wpcunofficial.miraheze.org/>, <http://wiki.logic-masters.de/>, <https://www.conceptispuzzles.com/>, <https://mellowmelon.wordpress.com/>.
- The original creator **opt-pan** for penpa edit - <https://opt-pan.github.io/penpa-edit/>
- **Swaroop Guggilam** for his recent efforts in adding features to Penpa-edit - <https://swaroopg92.github.io/penpa-edit/>

Genre 1: Hidato

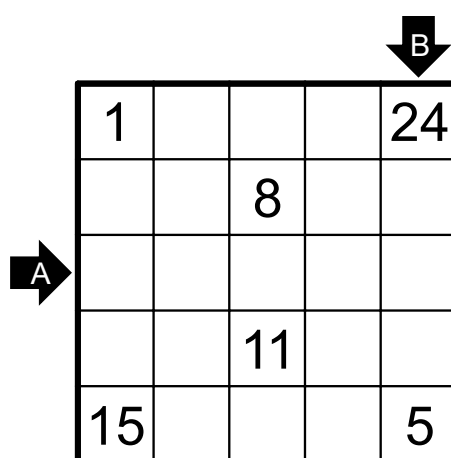
Rules: Place a number from 1 to N into each cell so that every number appears once, where N is the total number of white cells in the grid.

Every number must be adjacent (orthogonally or diagonally) to all numbers that are consecutive with it.

Answer Key: Enter the digits in the marked rows/columns in order. For double digit numbers, only input the units place digit.

Penpa solving link for example: <https://tinyurl.com/5hatv6ct>

Example Puzzle:



Origin of Hidato: (Hebrew: חידאתו, originating from the Hebrew word Hida = Riddle) Hidato is also known by other names such as Hidoku, Number snake, Snakepit, Jadium and Numbrix.

It was invented by **Gyora Benedek**, an Israeli computer scientist, inventor and adventurer who has published several logic puzzle books using this genre, through the company Doo-Bee Toys & Games. A popular form of hidato is called **Numbrix** (created by Marilyn vos Savant and appearing in the weekly magazine **Parade**), where all the puzzle grids are square and diagonal moves are not allowed. Today Hidato is widely popular, commonly appearing in magazines, books, logic puzzle contests, and prominent newspapers.

Genre 2: Slitherlink

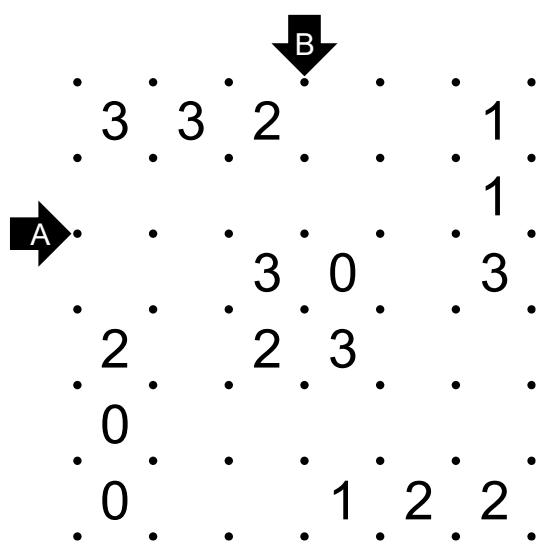
Rules: Draw a closed loop by connecting dots horizontally and vertically. The loop can't touch or cross itself.

The numbers in the grid indicate how many of the segments around it are used by the loop.

Answer key: For each marked row/column, enter the lengths of loop segments in that direction – from left to right/top to bottom, 0 if there are no segments.

Penpa solving link for example: <https://tinyurl.com/bdfrd3tr>

Example Puzzle:



Origin of Slitherlink: Undoubtedly the most popular loop puzzle genre in the world, Slitherlink also goes by names like “Fences” and “Loopy Loop”, and is a logic puzzle invented by Nikoli. The full name as it appears in Nikoli’s books is スリザーリンク, pronounced Surizarinku, and is commonly named “Sli-Lin” by Nikoli Fans in Japan. It first appeared in Puzzle Communication Nikoli #26 in June 1989, when the editor combined two original puzzles contributed there. The first version of Slitherlink had a number in every square and the edges did not have to form a loop.

Genre 3: Statue Park

Rules: Place all the given shapes (statues) in the grid so that they don't overlap or touch each other by a side.

The shapes can be rotated and reflected.

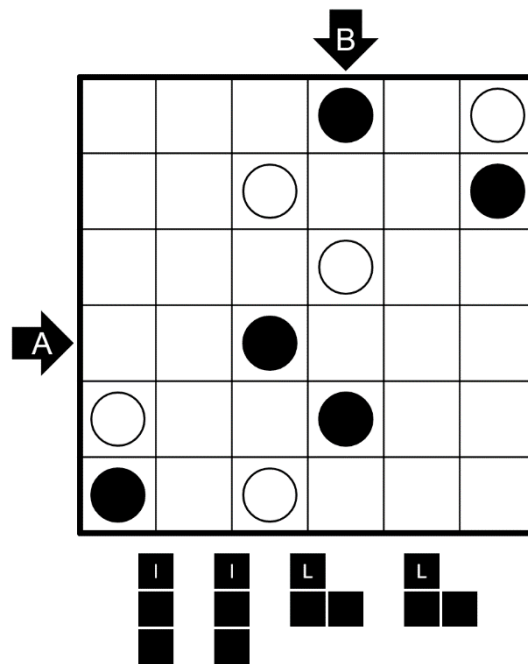
All the empty cells (lawn area) must be orthogonally connected to each other when all shapes are placed.

Black circles indicate cells that must be used by one of the shapes. White circles indicate cells that must remain empty.

Answer key: For each marked row/column, enter the lengths of consecutive runs of cells containing shapes and cells that remain empty.

Penpa solving link for example: <https://tinyurl.com/mu6sdenp>

Example Puzzle:



Origin of Statue Park: Statue Park was invented by Palmer Mebane, who first posted it on his [old blog](#) in 2011. Palmer combined pentomino placement [inspired by puzzles from Akil Oyunlari's Meraklisina (puzzles for fans)] with black square/connectivity rules from Nikoli types like Heyawake and Hitori. Since then, the simple-to-grasp ruleset and versatility of the puzzle type has made it popular on GMPuzzles as well as puzzle contests.

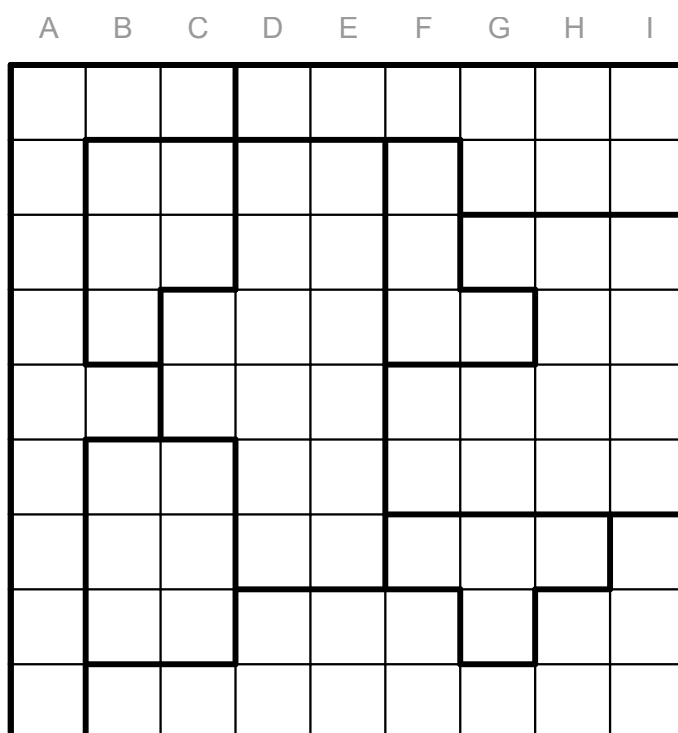
Genre 4: Star Battle

Rules: Place stars into some cells such that each row, column, and outlined region contains exactly 2 stars.

Stars may not touch one another, not even diagonally.

Answer key: The columns will be labelled with alphabet above the puzzle. Enter the column letter for the leftmost star in each row, from top to bottom.

Penpa solving link for example: <https://tinyurl.com/2p99eh7k>



Origin of Star Battle: *An object-placement classic, Star Battle is a Dutch puzzle style created by Hans Eendebak for the 2003 World Puzzle Championship in The Netherlands. 1-star, 2-star and 3-star puzzles are seen commonly, with 2-star ones being the most popular. Today there are hundreds of mobile apps, books and websites that have star battle puzzles/inspired variants, and it has even appeared in the New York Times as “Two Not Touch”.*

Genre 5: Nurikabe

Rules: Shade some empty cells so that the grid is divided into white areas- the islands.

Each island should exactly one number and with the same area in cells as that number.

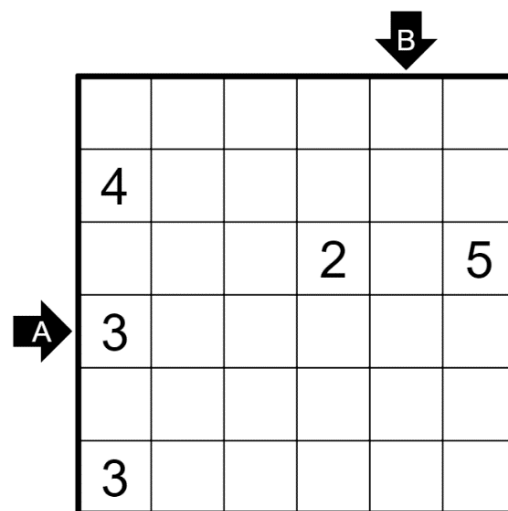
Two white areas may only touch diagonally.

All shaded cells must be connected with each other, but no 2x2 group of cells can be entirely shaded.

Answer key: For each marked row/column, enter the lengths of consecutive runs of shaded and unshaded cells.

Penpa solving link for example: <https://tinyurl.com/f9bbk22p>

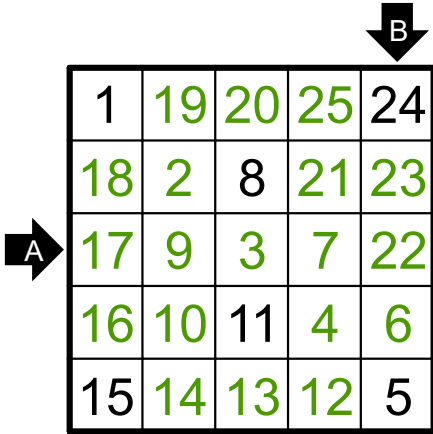
Example Puzzle:



Origin of Nurikabe: Nurikabe (hiragana: *ぬりかべ*) is a Nikoli puzzle type first developed by "reenin (*れーにん*)", whose pen name is the Japanese pronunciation of "Lenin". Nurikabe originally appeared in the 33rd issue of Puzzle Communication Nikoli (March 1991), but the genre quickly gained prominence, and it has appeared in every issue from the 38th to the present. It is named after an invisible wall in Japanese folklore that blocks roads and delays foot travel. Other names for the puzzle include *Cell Structure* and *Islands in the Stream*.

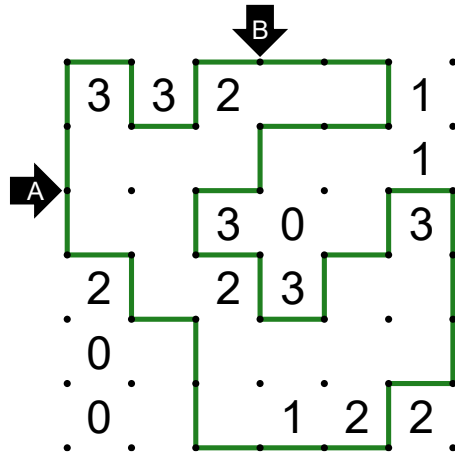
Solutions to the Example Puzzles

1. Hidato



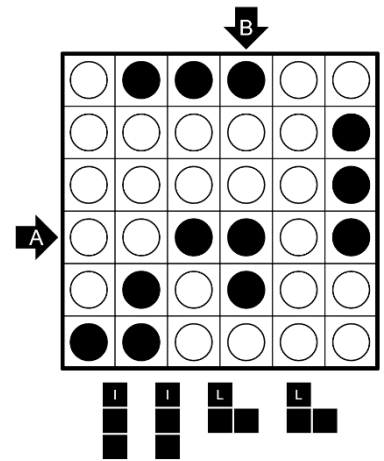
Answer Key:
A=79372,
B=43265

2. Slitherlink



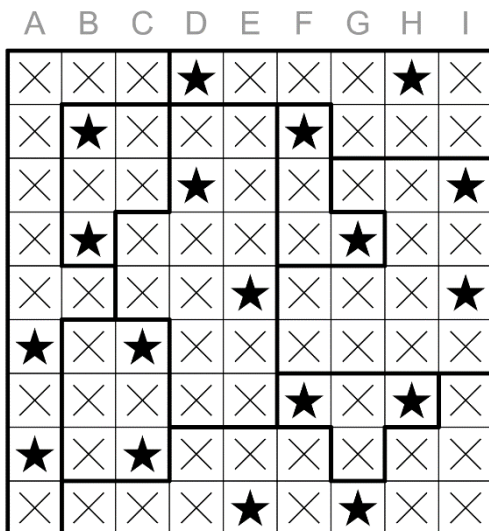
Answer Key:
A=11, B=11

3. Statue Park



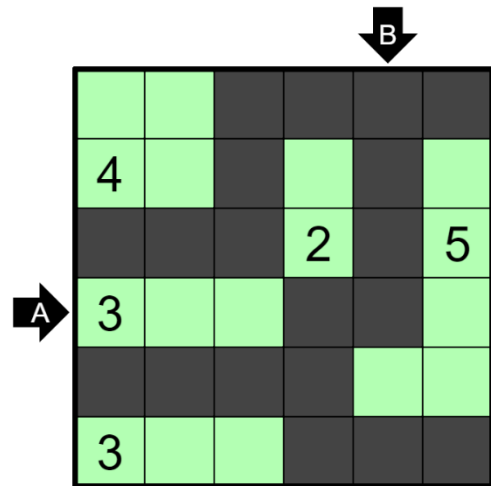
Answer Key:
A= 2211, B= 1221

4. Star Battle



Answer Key: DBDBEAFAE

5. Nurikabe



Answer Key: A= 321, B= 411