Indian Puzzle Championship 2013

07-July-2013

http://logicmastersindia.com/2013/IPC/

Important Links

Submission: http://logicmastersindia.com/2013/IPC/

Discussion: http://logicmastersindia.com/t/?tid=694

Results: http://logicmastersindia.com/2013/IPC/score.asp

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

About Indian Puzzle Championship (IPC) 2013

The Indian Puzzle Championship 2013 will be held online on 7th July, 2013. Participation is free of cost and everyone is invited to participate in the event irrespective of age. There are no prerequisites/requirements for participation. All you will need to do is register at Logic Masters India (LMI).

Top competitors will represent India at the World Puzzle Championship 2013 which will be held in China in October, 2013.

Participation

This instruction booklet lists all the puzzle types that will appear in IPC. It is important to read and understand rules of all the puzzles. There will not be any interface / applet to solve the puzzles on web browser. The puzzle booklet should be downloaded, printed and solved on paper. Each puzzle has 1 or 2 answer keys. After solving the puzzle, you need to submit the puzzle using the answer keys.

On 7th July at 14:00 hours, you need to login on the IPC webpage at LMI using your id and password. Once you click on 'Start', you will be shown the password for the puzzle booklet. Your timer will start at this point.

The puzzle booklet will have approximately 15 pages. Most of the puzzles are designed to be solved faster on paper. We advise you to have a printer accessible with enough paper.

Timings

The length of the championship is 150 minutes. So, after getting the password, you have 150 minutes to print the puzzles, solve them, find the answer keys and submit your answers. Submissions will not be accepted after 150 minutes.

IPC 2013 will start on 7th July at 14:00 hours IST. Answer submissions will not be accepted after 16:45 hours (or 150 minutes after you start, whichever is earlier). You must start accordingly to allow yourself full solving time.

International Participation

IPC will be open for a longer period for international players to participate at their own convenience. Indians participating out of the official period will not be considered for official Indian ratings.

Outside Help

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.

Judging

All entries and scores are subject to review for rules compliance. Winners may be asked to sign an affidavit confirming that they did, in fact, abide by the rules of the competition. The organizers reserve the right to disqualify any contestant if, in their sole judgment, they believe the rules have been violated.

In case of a dispute, protest, or other judgment, the decision of the judges is final.

Ranking

Ranking will be based on following rules in order:

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

About answer keys and Submission

1. You may submit the answer keys anytime during the test duration of 150 minutes. You may consider submitting a puzzle as soon as you solve it.
2. You may submit an answer multiple times, only the latest submission will be taken into consideration.
3. Answer keys are always to be entered from left to right or top to bottom
4. Don't enter any separator unless specified in the answer key
5. If one row and one column is marked, enter the row first and then the column
6. If multiple rows are marked, enter from top to bottom for marked rows
7. If multiple columns are marked, enter from left to right for marked columns
8. If horizontal and vertical keys are needed, first enter the horizontal and then the vertical
9. Uppercase or lower case of answer key does not matter
10. Characters other than alphabets, numbers and comma will be removed while checking the answer

Acknowledgements

Logic Masters India thanks the following puzzle solvers and makers for helping us organize Indian Puzzle Championship 2013.

Branko Ceranic
Cedomir Milanovic
Fred Coughlin
Horvath Zoltan
Nikola Zivanovic
Serkan Yurekli

Only for Indian Participants

1. Submissions until 16:45 on 7th will be considered for official scoring.
2. The organizers do not anticipate any technical problems during the championship. However, if you face any problems while submitting the answers, you may email your answers to logicmasteradmin@gmail.com before 16:45 pm. Submissions via email is discouraged and will be accepted only in exceptional cases.

Scoring

Each puzzle is allotted points. You will get full points if you enter the correct answer key.

Points typically indicate difficulty of the puzzles and time required to solve them. However, your personal experience may differ.

There is no negative penalty for incorrect submission.

Points Table

A1 - Multiple Choices	30	A2 - Multiple Choices	30
B1 - As Easy As ABC	25	B2 - Strangely As ABC	25
C1 - Battleships	20	C2 - Battleships	50
D1 - Regional Star Battle	25	D2 - Regional Star Battle	45
E1 - Sudoku	30	E2 - Skyscrapers Sudoku	30
F1 - B&W Loop	35	F2 - B&W&H Loop	40
G1 - Kakuro	40	G2 - Pentomino Kakuro	65
H1 - Missing Words	45	H2 - Missing Letters	30
I1 - Tapa	25	I2 - Difference Tapa	45
J1 - Corridors	30	J2 - Happy Dots	40
K1 - Tents	55	K2 - Family Tents	60
L1 - Nurikabe	20	L2 - Snake Eggs	65
M1 - Slitherlink	60	M2 - Crosslink	35

- Note about A1 – Multiple Choices
  - There are 3 sub-puzzles; each sub-puzzle is worth 10 points.
  - Partial marks will be awarded if you do not submit the answer for all parts of this puzzle.
  - However to get partial points, none of the parts must be incorrect
- Same scoring applies to A2 – Multiple Choices.

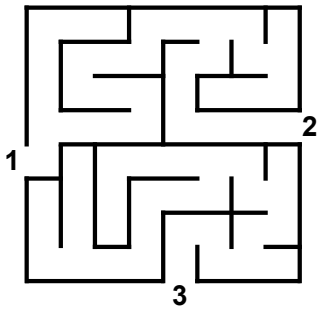
Bonus

- Players submitting all 26 puzzles are eligible for bonus points.
  - If 26 are correct, 6 points per minute saved.
  - If 25 are correct and 1 is almost-correct, 5 points per minute saved.
- Bonus will be computed upto seconds.
- There will not be any “Claim Bonus” button.

A1 – Multiple Choices

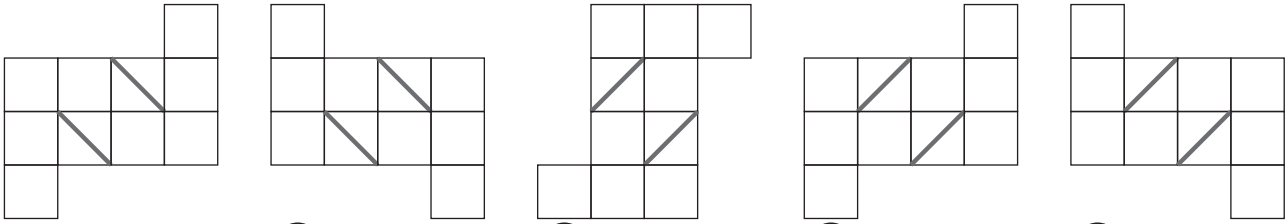
- In each puzzle, several choices will be given as answers / solutions. Identify the correct one.
- Puzzle types are
  - Maze (Identify the pair of digits that are connected through the maze)
  - Mirror image (Identify the horizontal or vertical mirror image of the original image)
  - Odd One Out (Identify the option which is different from others)

Maze



A 1-2
B 1-3
C 2-3
D None

Mirror Image



Odd One Out

1, 4, 9, 15, 25

I 1
J 4
K 9
L 15
M 25

Answer Key: Enter the letters corresponding to correct solutions.
For the example, the answer key is AHL.

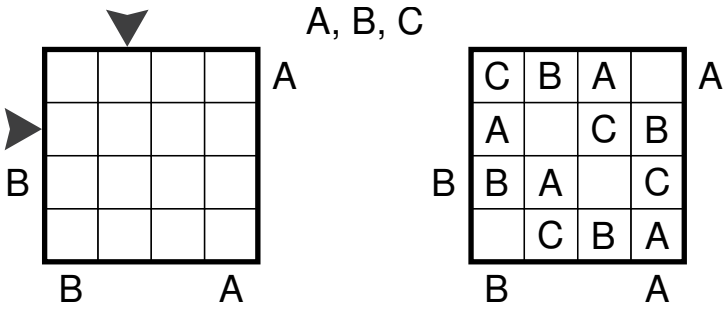
A2 – Multiple Choices

- In each puzzle, several choices will be given as answers / solutions. Identify the correct one.
- Different puzzle types will be available in the puzzle booklet.

Answer Key: Same as A1.

B1 – As Easy As ABC

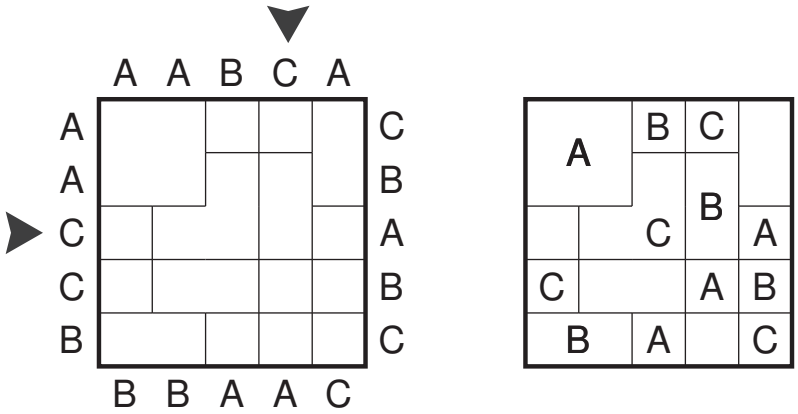
- Place a letter from the given set in some blank cells, so that each letter appears exactly once in each row and each column.
- Some cells will remain empty in each row and column.
- The letters outside the grid show the first seen letter from that direction.



Answer Key: Enter the letters in the marked directions. Enter X for blank cells.
For the example, the answer key is AXCB,BXAC

B2 – Strangely As ABC

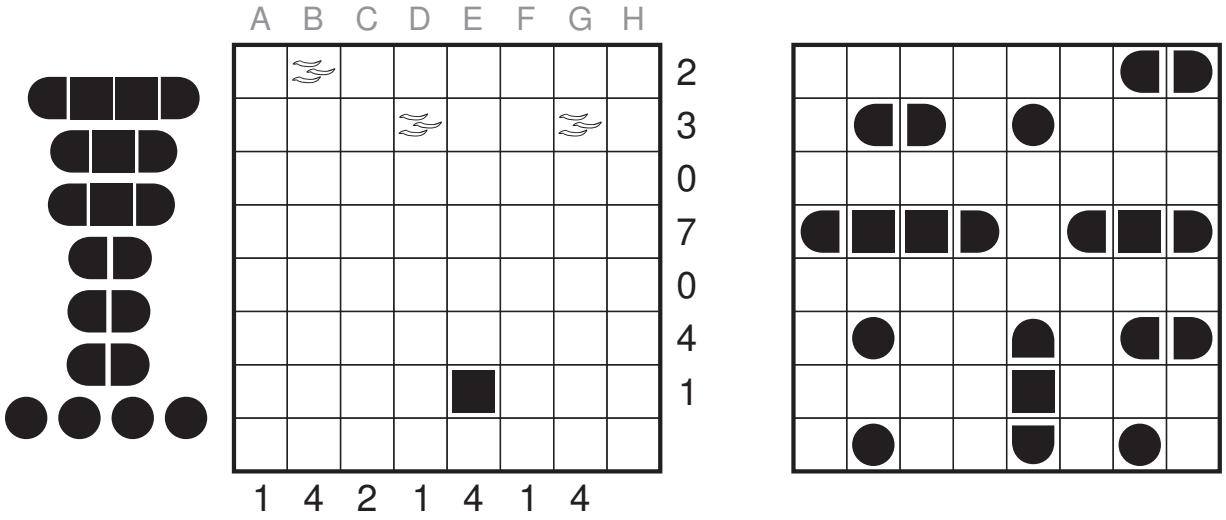
- Apply rules of "B1 – As Easy As ABC".
- Some cells extend into several rows / columns.



Answer Key: Enter the letters in the marked directions. Enter X for blank cells.
For the example, the answer key is XCBA,CBAX

C1, C2 – Battleships

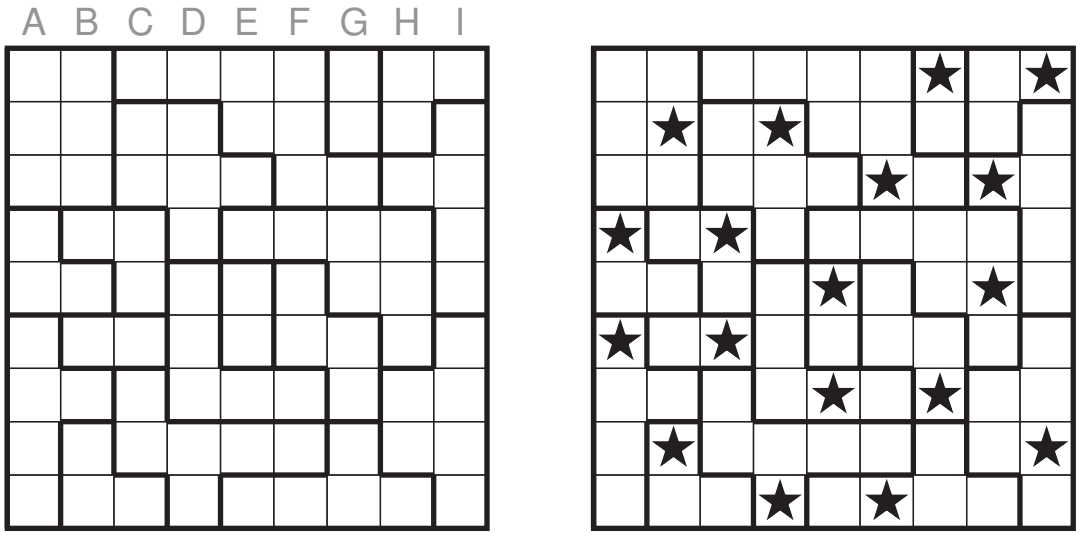
- Locate the given fleet in the grid, so that each segment of a ship occupies a single cell.
- Ships do not touch each other, not even diagonally.
- Some ship segments, or sea cells without any ship segments, are given in the grid.
- The numbers on the right and bottom edges of the grid reveal the number of ship segments in that row or column.



Answer Key: For each row from top to bottom, enter the column position of left most ship. Enter X if no ships. For the example, the answer key is GBXAXBEB

D1, D2 – Regional Star Battle

- Place 2 stars in each row and each column.
- Stars do not touch each other, not even diagonally.
- Each outlined region contains same number of stars.

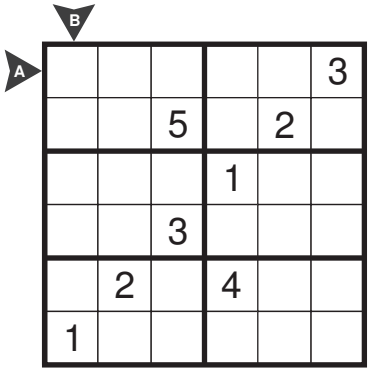


Answer Key: For each row from top to bottom, enter the column position of left most star. For the example, the answer key is GBFAEAEBD

This example appeared in WPC'2011 instructions booklet as (Star Battle) Small Regions.

E1 – Sudoku

- Place a digit from 1 to N in each cell of the N by N grid.
- Digits do not repeat in rows or columns or outlined regions.



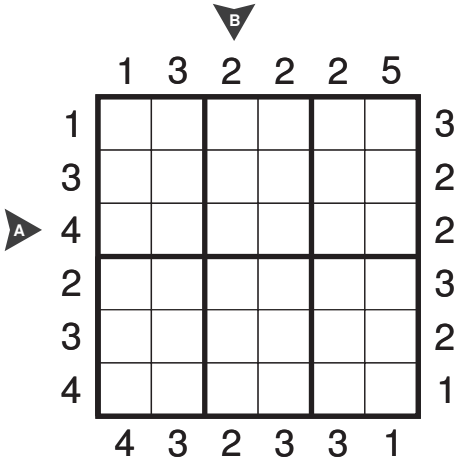
					3
		5		2	
			1		
		3			
	2		4		
1					

2	6	1	5	4	3
4	3	5	6	2	1
5	4	2	1	3	6
6	1	3	2	5	4
3	2	6	4	1	5
1	5	4	3	6	2

Answer key: Enter the digits in the marked directions.
For the example, the answer key is 261543,245631

E2 – Skyscrapers Sudoku

- Apply rules of "E1 – Sudoku".
- Digits inside the grid represent height of skyscraper in that cell.
- Digits outside the grid represent total number of skyscrapers seen (not blocked by a taller skyscraper) from the corresponding direction.

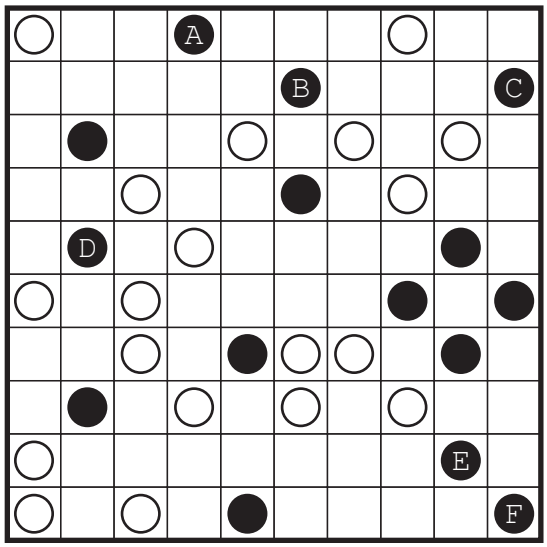


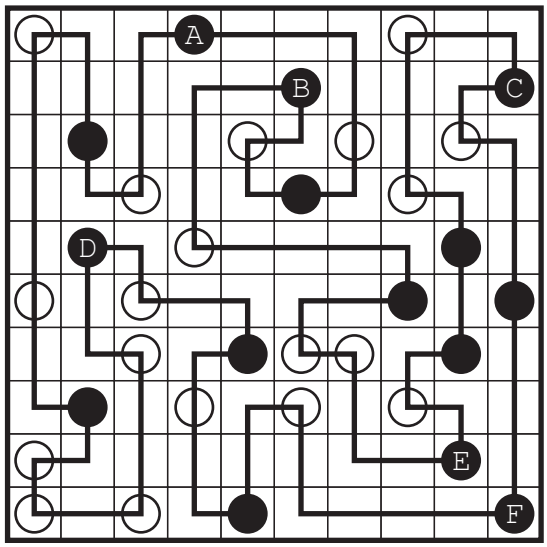
6	1	4	3	5	2
4	5	2	6	1	3
2	3	1	5	6	4
5	6	3	2	4	1
3	4	6	1	2	5
1	2	5	4	3	6

Answer key: Enter the digits in the marked directions, excluding the outside clues.
For the example, the answer key is 231564,421365

F1 – Black & White Loop

- Draw a loop which passes all cells exactly once.
- Between two circles with same colour the loop cannot turn.
- Between 2 circles with different colours, the loop must turn exactly once.

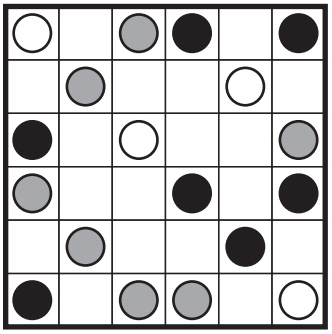


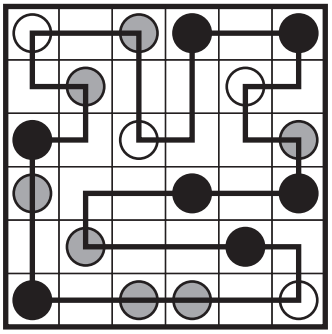


Answer key: Starting with A and traveling clockwise around the loop, enter the order the letters are visited
For the example, answer key is ABECFD

F2 – Black White & Grey Loop

- Apply rules of "F1 – Black & White Loop", except that some circles are grey.
- Each grey circle can act as either a white circle or a black circle or both.

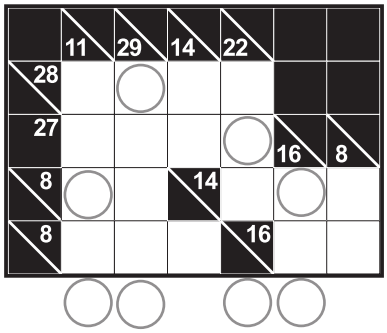


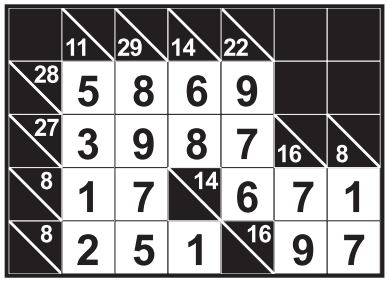


Answer key: Same as F1 – Black and White Loop

G1 – Kakuro

- Place a digit from 1 to 9 in each white cell
- Sum of each horizontal/vertical group of cells equals the number given on its left/top.
- Digits must not repeat within such group.
- Ignore the circles while solving. They are used for answer key purposes only.

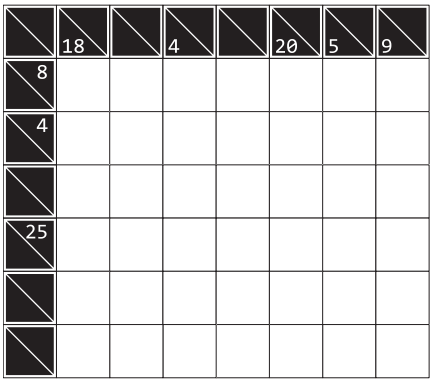


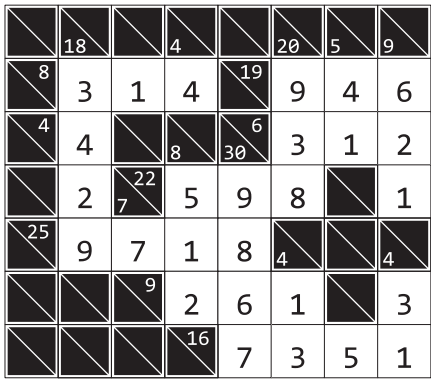


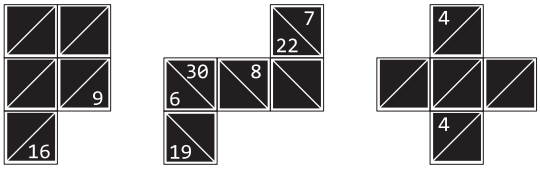
Answer key: Some columns have one circled cell. Enter the digits in circled cells from left to right. For the example, answer key is 1877

G2 – Pentomino Kakuro

- Place the given pieces into the white cells to form a Kakuro puzzle.
- The pieces may be rotated, but not mirrored.
- The pieces cannot touch each other, not even diagonally.







Answer key: Same as G1 – Kakuro. Enter X if any of the given piece is placed on a cell.

H1 – Missing Words

- Locate all except 4 (four) given words in the grid.
- The words appear in a straight line horizontally, vertically, or diagonally.
- Ignore the labels while solving. They are used for answer key.

A: ANAND
B: BHUTIA
D: DHYAN
G: GEET
J: JASPAL
K: KAPIL

P	S	D	H	Y	A	N	I
V	X	T	G	E	E	T	P
L	Q	D	N	A	N	A	Y
I	M	I	L	K	H	A	A
P	S	V	E	E	J	N	L
A	S	U	N	I	L	G	L
K	A	D	V	A	N	I	I
Y	N	I	H	C	A	S	P

L: LEANDER
M: MILKHA
N: NARAIN
P: PILLAY
S: SACHIN
V: VIJAY

ANAND
~~BHUTIA~~
DHYAN
GEET
~~JASPAL~~
KAPIL
~~LEANDER~~
MILKHA
~~NARAIN~~
PILLAY
SACHIN
VIJAY

Answer key: Enter the labels of the missing words.
For the example, answer key is BJLN

H2 – Missing Letters

- Locate all the given words in the grid.
- The words appear in a straight line horizontally, vertically, or diagonally.
- It is part of solving to fill in the missing letters in the grid.

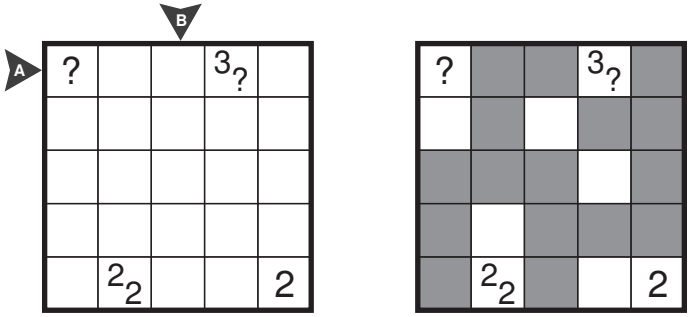
KASA
KATI
KITA
KUTU
KUZU
MAKAS
SAAT
SAKIZ
TAKAS
ZAMAN

S	N	A	M	A	Z
U	S	A	K	S	S
A	S			A	T
U	T			A	S
I	Z	I	A	A	S
U	Z	S	K	T	M

S	N	A	M	A	Z
U	S	A	K	S	S
A	S	A	K	A	T
U	T	U	K	A	S
I	Z	I	A	A	S
U	Z	S	K	T	M

I1 – Tapa

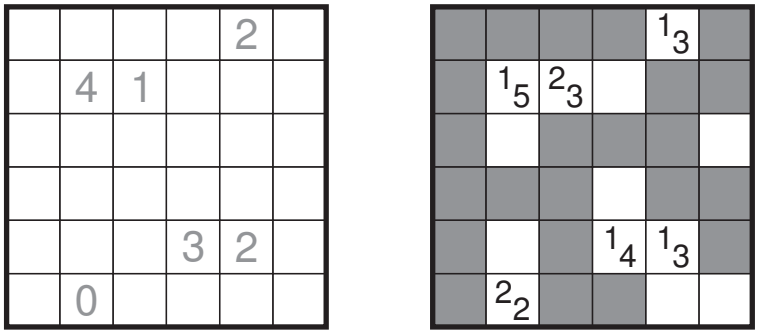
- Paint some empty cells black to create a continuous wall.
- Number/s in a cell indicates the length of black blocks on its neighbouring cells.
- If a cell has more than one number, there is at least one white cell between the black blocks.
- No 2X2 square contains only painted cells.
- Question marks (?) are replaced by non-zero digits.



Answer Key: Enter the lengths of separate painted cell blocks in the marked directions.
For the example, the answer key is 21,13

I2 – Tapa Difference

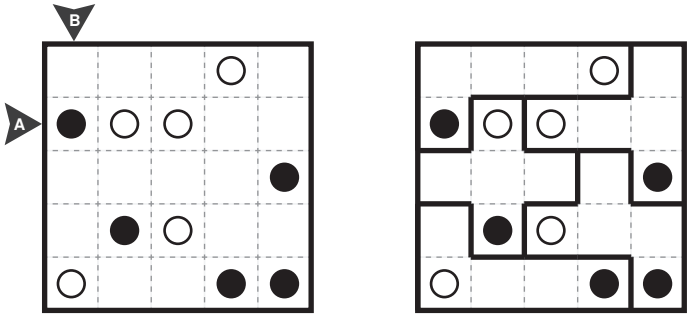
- Replace each clue with two non-zero digits whose difference is equal to the clue.
- Apply "I1 –Tapa" rules.



Answer Key: Same as I1 – Tapa.

J1 – Corridors

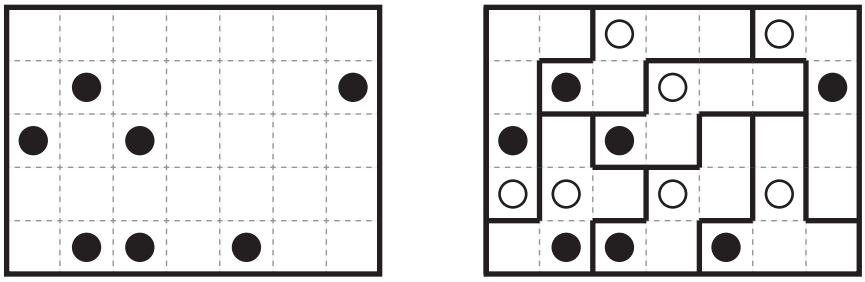
- Divide the grid along the grid lines into regions consisting of five adjacent cells.
- Each region contains exactly one white and one black circle.
- No 2X2 area belongs to a single region.



Answer Key: Enter the lengths of separate regions in the marked directions. For the example, the answer key is 113,212

J2 – Happy Dots

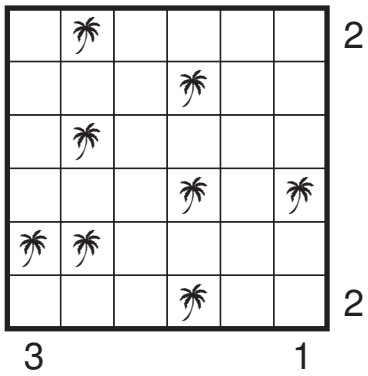
- Rules are same as “J1 – Corridors”, except that the white circles are missing.
- Place one white circle diagonally next to each black circle.

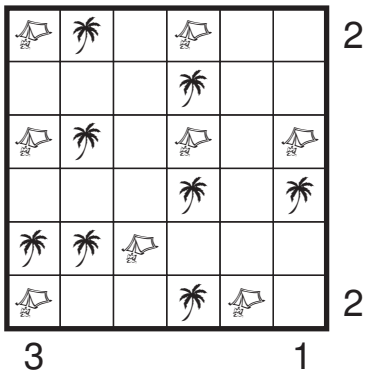


Answer Key: Same as J1 – Corridors

K1 – Tents

- Place a tent horizontally or vertically next to each tree.
- Tents connected to different trees do not touch each other, not even diagonally.
- Numbers outside the grid indicate the number of tents in that row or column.

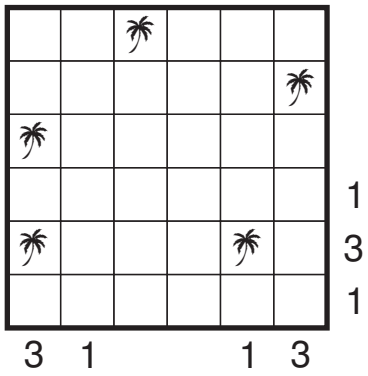


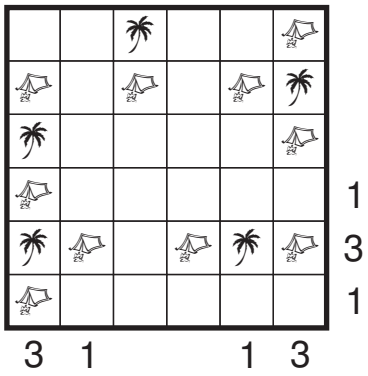


Answer Key: For each row from top to bottom, enter the number tents connected horizontally to the trees. For the example, the answer key is 101011

K2 – Family Tents

- Same rules as "K1 – Tents" except that a tree can have more than one tent connected to it.
- Tents connected to same tree can touch each other diagonally.

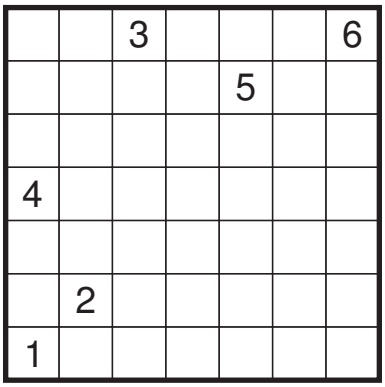


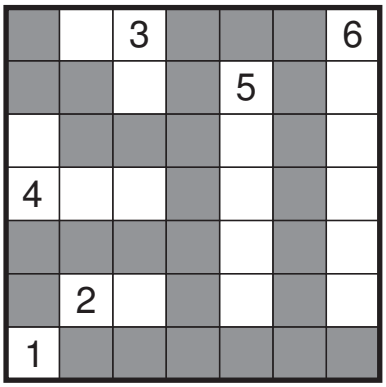


Answer Key: Same as K1 – Tents.

L1 - Nurikabe

- Shade some blank cells so that the grid is divided into white regions.
- Each white region contains exactly one numbered cell and has same area as the number.
- Two white regions may only touch each other diagonally.
- All shaded cells are connected to each other horizontally or vertically.
- Shaded cells do not form 2X2 squares.

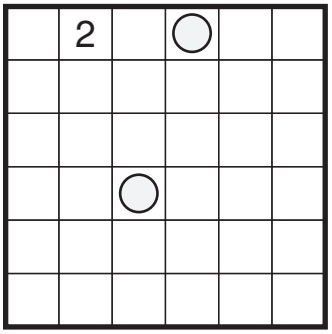


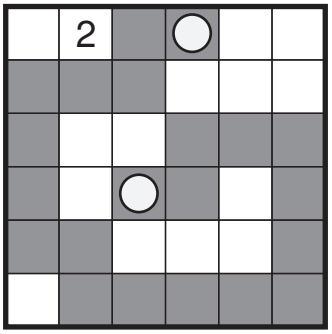


Answer key: Same as I1 – Tapa

L2 – Snake Eggs

- Locate a snake, passing through non-numbered cells, whose head and tail are given.
- The snake cannot touch itself orthogonally, but can touch itself diagonally.
- The remaining cells should form 9 separate regions with sizes 1~9 each. (Examples uses 1~5)
- Numbers in the grid indicate size of the region.

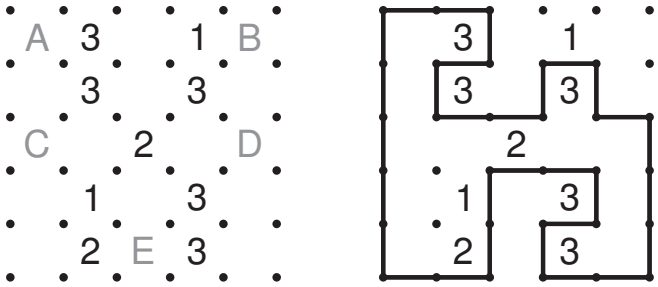




Answer key: Same as I1 – Tapa

M1 - Slitherlink

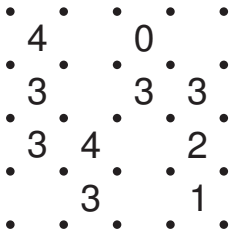
- Draw a single continuous loop along the dotted line segments.
- The loop cannot intersect or collide with itself.
- Clues given inside the cell indicate the count of line segments surrounding the cell those are part of the loop.
- Ignore the letters while solving. They are used for answer key purpose.

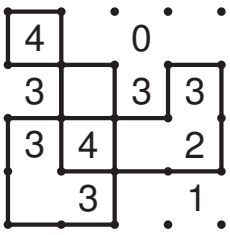


Answer Key: Starting from A, for each letter in alphabetical order, enter the number of line segments around it. For the example, the answer key is 20122

M2 – Crosslink

- Apply same rules as "M1 – Slitherlink" except that the loop may intersect itself at a point.
- At every intersection, the segments travel straight through the dot.





Answer key: Same as M1 – Slitherlink