## 2022 |ndian Puzzle Championship

## Instructions Booklet

$20^{\text {th }}$ August 2022, Pune

## Round Composition at a Glance


(PR 1 Classis) Star Battle 90(PR1Classiss) Slant 15 (PR 4 Number Placment) Doppelblock(PR1Classiss) Slant $60 \quad$ (PR4 Puzz Link) Scrin 20
(PR 2 Casual) Touching Shapes 40
(PR 2 Word) Scrabble 65
(PR 3 Regions) Sashigane 20
(PR 3 Regions) Sashigane 6530
(PR 3 Evergreens) Easy as ABC
(PR 4 Puzz Link) Scrin 20
(PR 5 Loops) Masyu 15
(PR5 Shading) Kurodoko 40
(PR 6 Made in India) Heterocut 30
(PR 6 Object Placement) Akari 20

Round 2: Uncharted Waters

12 puzzles
60 minutes
TOTAL
600
Points

Fillomino 20
Yin Yang 20 Battleships 45
Linesweeper 30 Minarism 20
Dominion 40

Haisu 50
Spiral Galaxies 45
Letter Weights 110
Statue Park 45
Canal View 85
Letter Pairs 90

## Round 3:

Dailies Return
12 puzzles
45 minutes
TOTAL
450
Points
(Tapa Train) Tapa 20
Tapa 25
(Rassi Silai Race) Rassi Silai 40 Rassi Silai 35
(Noxas Vacation) Voxas 20
Voxas 60
(Kuroto Kingdom) Kurotto 50
Kurotto 40
(Kakuro Kart) Kakuro 50
Kakuro 45
(Yajilin Yacht) Yajilin 25
Yajilin 40

Round 4: Hangover 9 puzzles
50 minutes
TOTAL 500
Points

# Cross Math 45 All You Can Eat 20 Witamy w Polsce 50 

 St. Mary's Basilica 30 Baggage Claim 30Double Cross 110
Sudoku Blocks 100 Gift Shop 35 Hidden Words 80

## Contributors

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## Puzzle 1: Star Battle

Place a star in some empty cells so that each row, column, and bold region contains the indicated number of stars. Stars cannot be placed in adjacent cells that share an edge or corner.

## Puzzle 2-3: Slant

Place a diagonal line into each cell, connecting two opposite corners, such that no loops are formed by the diagonal lines. A clue in a circle indicates how many lines are extending from that circle in the (up to) 4 surrounding cells.


## Puzzle 4: Touching Shapes

Place each shape from the bank given outside the grid into the grid so that no shapes touch one another orthogonally. Rotating and reflecting shapes is allowed. Every grid point on which two shapes touch diagonally is marked with a dot.


## Puzzle 5: Scrabble

Place all the listed words exactly once in the grid going across (left to right) or down (top to bottom). Treat each word as one consecutive entry (ignoring gaps). Each word intersects with at least one other word and all words are interconnected. No words of two or more letters can appear anywhere in the grid, except the ones listed. Some letters are already given.


|  |  |  |  | $J$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $D$ | $U$ | $N$ | $C$ | $A$ | $N$ |  |
|  |  |  |  | $B$ |  |  |
| $V$ | I | N | C | E | N | T |
|  |  |  |  | $Z$ |  |  |

DUNCAN
JABEZ
VINCENT

## Puzzle 6-7: Sashigane

Divide the grid into regions of orthogonally connected cells. Each region must be an L shape with a width of one cell. Arrows must lie at one end of an $L$ and point toward the bend. Circles must lie at the bend of an $L$, and if one contains a number, the $L$ it's inside must contain the indicated number of cells.


## Puzzle 8: Easy as ABC

Place letters from the given set into some cells so that each row and column contains each letter once. A clue outside the grid represents the first letter seen in the corresponding row or column from that direction.

## Puzzle 9: Doppelblock

Place a number from 1 to $\mathrm{N}-2$ into some cells so that each row and column contains every number from that range with no repeats, where N is the side length of the grid, and shade the remaining two cells of each row and column. A clue outside the grid indicates the sum of the digits which appear between the two shaded cells in the corresponding row or column.

## Puzzle 10: Scrin

Shade some cells so that each orthogonally connected area of shaded cells is in the shape of a rectangle. The shaded rectangles must all form a single loop through diagonal connections, with no branches. All cells with circles must be shaded, and if a circle contains a number, its shaded rectangle must contain the indicated number of cells. A shaded rectangle may contain 0 or 1 circles.


## Puzzle 11: Masyu

Draw a non-intersecting loop, traveling orthogonally through the centers of some cells, that passes through every circle. The loop must turn on black circles and travel straight through the cells on either side. The loopmust go straight through white circles, and turn in at least one of the cells on either side.


## Puzzle 12: Kurodoko

Blacken some cells so that no black cells are orthogonally adjacent to each other, they may touch diagonally. The circled numbers represent the number of cells that can be seen from that cell, including the cell itself. Cells can be seen if they are along the same straight horizontal/vertical line until black cells or the edge of the grid is encountered. All unshaded cells must interconnect in the end.

## Puzzle 13: Heterocut

Divide the grid into regions of orthogonally connected cells, each containing a number of cells within the given range. No two regions may be the same size and shape, counting rotations and reflections as the same. Borders must separate two different regions, and an arrow on a border always points toward the larger of the two regions.

(2-5)

(2-5)


## Puzzle 14: Akari

Place lights in some cells so that every cell is illuminated. Lights illuminate the cell they're in as well as all cells seen in a straight line horizontally or vertically, not obstructed by a black cell. Lights may not illuminate each other. Clues represent the number of lights
 in the (up to) four cells surrounding the clue.

## Puzzle 1: Fillomino

Divide the grid into regions of connected cells, where numbers represent the size of that region. Same-sized regions cannot be orthogonally adjacent to each other. It is possible for areas to contain no given clues.

## Puzzle 2: Yin Yang

Fill in each cell with either a white circle or a black circle. All white circles must form a single orthogonally contiguous area, similarly, all black circles must form a single orthogonally contiguous area. There cannot be any $2 \times 2$ area that contains all white or all black circles.

## Puzzle 3: Battleships

Locate a fleet of battleships in the grid. Each ship segment occupies a single cell. Ships can be placed horizontally or vertically but not diagonally. Different ships cannot touch each other, not even diagonally. Numbers outside the grid represent the number of ship segments in that row or column. Some ship segments may have already been given in the grid. Ships may not occupy sea cells (represented by waves).

## Puzzle 4: Linesweeper

Draw a single closed loop travelling along horizontally or vertically adjacent cells. Clues represent the number of cells, surrounding that square, that is used by the loop. The loop may not travel through clue cells and cannot intersect itself.



|  |  | 3 |  | 2 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
|  | 6 |  |  |  | 5 |  |
|  |  |  |  |  |  |  |
|  | 6 |  |  |  | 7 |  |
|  |  |  |  |  |  |  |
|  |  | 3 |  | 3 |  |  |

## Puzzle 5: Minarism

Enter numbers $1-\mathrm{N}$ into the grid so that each number appears exactly once in each row and column. All greater-than signs must be obeyed. Circled numbers between two cells represent the difference of the two digits.

## Puzzle 6: Dominion

Place $1 \times 2$ dominoes into the grid by shading in empty cells. Dominoes may not be orthogonally adjacent to each other but may touch diagonally. Shaded dominoes must divide the grid into regions indicated by letters. Identical letters must be in the same region and different letters may not be in the same region. All regions must have at least one letter.

## Puzzle 7: Haisu

Draw a single path, beginning at " S " and ending at " $G$ ", that passes through every cell. The path can only travel across horizontally or vertically adjacent cells. A number N indicates that the cell is visited by the path on its Nth visit to the region containing that number.

## Puzzle 8: Spiral Galaxies

Divide the grid along the grid lines into connected regions (galaxies) with rotational symmetry. Each cell must belong to exactly one galaxy. Every galaxy must have exactly one circle as its centre of rotational symmetry.



## Puzzle 9: Letter Weights

Write a number from the given range under each letter so that the numbers corresponding to the letters in each word have the given sum. Different letters must stand for different numbers.


Numbers: $\begin{array}{llllll}1 & 2 & 3 & 4 & 5\end{array}$

$$
C A B=11
$$

$$
\mathrm{BEE}=7
$$

$A B E=8$

A B C D E

| 2 | 5 | 4 | 3 | 1 |
| :--- | :--- | :--- | :--- | :--- |

## Puzzle 10: Statue Park

Place all the given shapes into the grid, pieces can be rotated and reflected. Shapes cannot be orthogonally adjacent to each other. In the end, all unoccupied cells must be connected. Black circles in the grid represent spaces that must be contained in one of the shapes, and white circles represent spaces that may not be contained in a shape.

## Puzzle 11: Canal View

Shade some cells so that all shaded cells form one orthogonally connected area. Clues represent the number of shaded cells connected in a straight line horizontally or vertically to the clue before reaching an unshaded cell or the edge of the grid. Clues cannot be shaded and no
 $2 \times 2$ region may be entirely shaded.

## Puzzle 12: Letter Pairs

Place the listed words into the grid so that they read from top-bottom or left-right without crossing or overlapping each other. A dot between two cells indicates that both cells contain the same letter. All possible dots are marked.



## Puzzle 1-2: Tapa

Shade some empty cells black to create a single connected wall. Numbers in a cell indicate the length of consecutive shaded blocks in the neighbouring cells. If there is more than one number in a cell, then there must be at least one white (unshaded) cell between the black cell groups. Cells with numbers cannot be shaded, and the shaded cells cannot form a $2 \times 2$ square anywhere in the grid.

| 2 |  |  |  |  | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
|  |  |  | 4 |  |  |
|  |  |  |  |  |  |
|  | $1_{2}^{2}$ |  |  |  |  |
|  |  |  |  |  | 3 |


| 2 |  |  |  |  | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
|  |  |  | 4 |  |  |
|  |  |  |  |  |  |
|  | $1_{2}{ }^{2}$ |  |  |  |  |
|  |  |  |  |  | 3 |

## Puzzle 3-4: Rassi Silai

Within each region, draw a single non-intersecting path through the centres of all the cells. The path may not cross bolded lines. No two cells in the grid containing endpoints of paths may be touching one another, not even diagonally, even across regions.


## Puzzle 5-6: Voxas

Split the grid into $1 \times 2$ or $1 \times 3$ regions so that every cell is part of exactly one region. Some edges have already been drawn in. White dots separate two regions that are identical in size and orientation. Black dots separate two regions that are different in both size and orientation. Grey dots separate two regions that are either identical in size or in orientation, but not both.


## Puzzle 7-8: Kurotto

Shade some empty cells so that each circled clues represent the total count of connected shaded cells sharing an edge with that clue. Cells with circles cannot be shaded. A blank circle means the clue can be any number, including zero.


## Puzzle 9-10: Kakuro

Fill in numbers 1-9 so that the sum of each horizontal group equals the digit on the left, and the sum of each vertical group equals the digit on the top. Numbers may not repeat in any same sum.


## Puzzle 11-12: Yajilin

Blacken some white cells and then draw a single closed loop (without intersections or crossings) through all remaining white cells. Blackened cells cannot share an edge with each other. Numbered arrows in clued cells indicate the total number of blackened cells that exist in that direction in the grid.

|  |  | $3 \downarrow$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  | $\overleftarrow{1}$ |



## Puzzle 1: Cross Maths

Enter digits from 1-9 into the blank cells so that all numbers are used once. All equations are read from left to right or top to bottom (ignore order of operations) and must be correct.


| 5 | - | 3 | $\times$ | 7 |  | 14 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\times$ |  | + |  | + |  |  |
| 4 | + | 2 | + | 8 |  | 14 |
| - |  | + |  | - |  |  |
| 6 | + | 9 | / | 1 |  | 15 |
| $=$ |  | = |  | = |  |  |
| 14 |  | 14 |  | 14 |  |  |

## Puzzle 2: All You Can Eat

A group of friends is having lunch. You are shown the foods that each people is eating. Using the points table, figure out who ate the most.


Answer. Sumit
(1200, Ashish = 1100, Rishi $=1000$ )

## Puzzle 3: Witamy w Polsce

Find the listed words hidden in the grid. They can be found in any of the eight straight directions. One of the listed words will be found 5 times.
Scoring: Full points for every word found. Minus 5 points for every word not found, the lowest score you can achieve in this puzzle is 0 points.

ONE
TWO
THREE
FOUR

| T | W | F | N | E | O |
| :---: | :---: | :---: | :---: | :---: | :---: |
| H | R | O | W | T | E |
| F | O | U | N | F | U |
| E | O | R | O | E | O |
| R | W | U | E | R | F |
| E | R | R | R | O | R |
| F | H | U | U | F | T |
| T | O | N | O | O | W |
| F | R | U | T | U | F |


| T | W | F N | N E | E | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| H | R | Ow | W-1 | T | E |
| F | 0 | $\psi$ | NF | $F$ | U |
| E | Q | R | $\varnothing$ E | E | 0 |
| R | W |  | E R | R | F |
| E | R | $R$ | $R O$ | 0 | R |
| , | H | $\downarrow$ | Q F | F | T |
|  | $\varnothing$ | N | 00 | Q | W |
| F | R | U | T U | U | F |

## Puzzle 4: St. Mary's Basilica

Find the listed words hidden in the picture. Every letter in a word will be spelt out in the same direction.
Scoring: Full points for every word found. Minus 5 points for every word not found, the lowest score you can achieve in this puzzle is 0 points.

[COW, DRAGON, FOX, LION, TIGER]

## Puzzle 5: Baggage Claim

Team India is heading to Poland but their luggage got mixed up. Use the clues to figure out which bag belongs to who. All pairings must be correct to score full points.


[Answer. A= Karthik, B= Gaurav, C= Pranav, D= Anubhav]

## Puzzle 6: Double Cross

Enter the given pairs of words into the diagram, one letter per cell and reading from left to right or top to bottom. Each pair is formed of one horizontal and one vertical word that share a cell. All shared cells are given. Cells with letters from different pairs of words may not share an edge or corner.


ANY + PAIR
TWO + FORM

## Puzzle 7: Sudoku Blocks

Use the given tiles to cover up the given Sudoku, one tile per bolded region. Tiles can only be used once each and cannot be rotated or reflected. The remaining uncovered numbers become givens for a Classic Sudoku. Solve the Sudoku to score the full points. Write your answer on the empty grid provided.

| 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 4 | 4 | 6 | 4 | 4 | 6 |
| 2 | 3 | 5 | 6 | 1 | 2 |
| 4 | 6 | 1 | 5 | 3 | 4 |
| 2 | 5 | 3 | 2 | 6 | 1 |
| 5 | 1 | 3 | 4 | 6 | 5 |



| 1 | 4 | 3 | 6 | 2 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2 | 5 | 6 | 1 | 4 | 3 |
| 6 | 3 | 5 | 4 | 1 | 2 |
| 4 | 2 | 1 | 5 | 3 | 6 |
| 3 | 6 | 4 | 2 | 5 | 1 |
| 5 | 1 | 2 | 3 | 6 | 4 |

## Puzzle 8: Gift Shop

There are several gifts for sale. After browsing the items (and making a big mess), Zuzana has decided to buy one item for her friend. Which item did she buy?


Answer.

## Puzzle 9: Hidden Words

Find all the listed words in the grid. Words are read from left-right or top-bottom. Words cannot touch each other, not even diagonally. Letters outside has to appear in that row or column at least once. Shaded squares must be empty.


