

# PARAI3I UNIVERSE

14<sup>th</sup> – 19<sup>th</sup> August 2020

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## Important Links

Submission Page : <http://logicmastersindia.com/2020/08P/>

Discussion Thread : <http://logicmastersindia.com/t/?tid=2752>

F. A. Q. : <http://logicmastersindia.com/t/?tid=381>

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

## About this Contest

*(Author's note – The other Instruction Booklet that is posted with this is the actual one to see. This one, as well as the “storyline” below, are for thematic purposes only. There is only one set of puzzles, including 10 6x6 Sudokus, and 20 puzzles. There will only be one Puzzle Booklet, and it will be consistent with the other Instruction Booklet.)*

Hello dear participants! I had an interesting meeting, with a version of me from another Earth. Apparently this Prasanna has figured out a way to travel the Multiverse and is using that technology to look for places with a slight tweak in their puzzle histories leading to significant changes in puzzle types that got invented.

His past work includes

Parallel Universe (<https://logicmastersindia.com/lmitests/?test=M201404S>), and

Parallel Universe II (<https://logicmastersindia.com/lmitests/?test=M201404P2>).

This time, he came here, to our Earth, and apparently we have some different things going on here!

Our Classic puzzles apparently have some extra rules compared to the same ones on his Earth, and these extra rules all seem to be prominently used in some Puzzle type called Sudoku! I know, the name was weird to me too. It's got something to do with placing numbers in a grid and apparently it's pretty popular there.

After our conversation, that Prasanna prepared a contest with puzzle rules from their universe and also our classic puzzle types. He says he doesn't mind if some of you participate too, and we all know the internet can be used commonly across the Multiverse, so you are all welcome to participate, and I have translated and clarified some of the weird quirks of their Sudoku and what not.

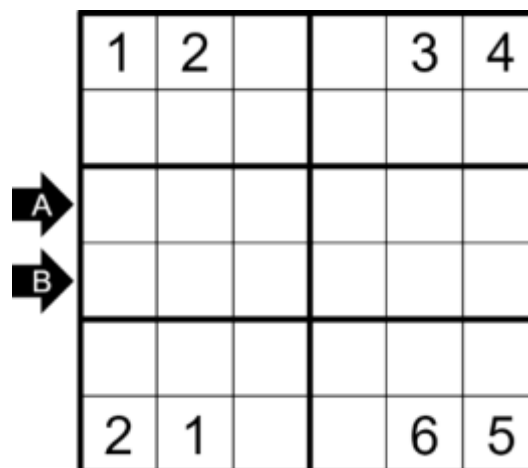
This booklet only contains the names and rules presented in a way that would be less jarring to the individuals of my universe. For points distributions, Penpa links, answer keys and what not please see the other booklet.



## 04 No Even Neighbours Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

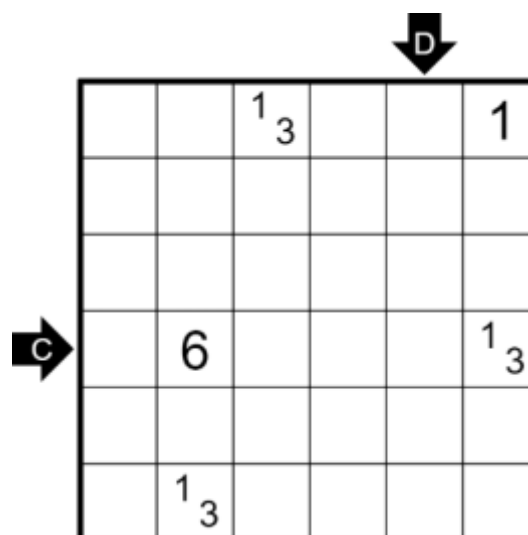
Even digits cannot be orthogonally adjacent.



## 05 Tapa with Even Neighbours

Follow regular Tapa rules as below.

Now, an unshaded cell orthogonally adjacent to a given clue that contains an even digit *can also contain even digits if it were clued in the final solution!*

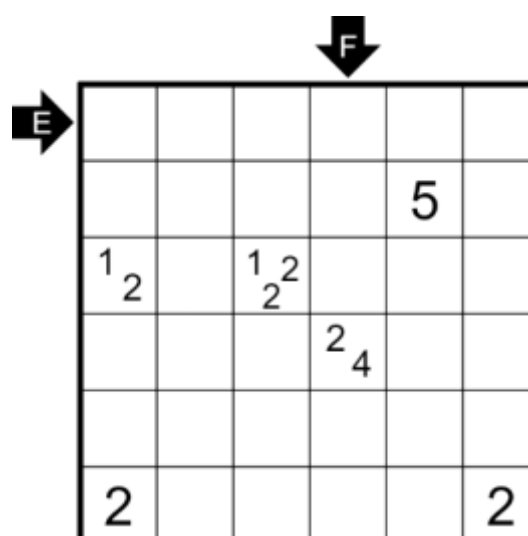


## 06 Tapa

Shade some cells to form a continuous wall. Number/s in a cell indicate the length of shaded cell blocks on its neighbouring eight cells. If there is more than one number in a cell, there must be at least one white cell between the shaded cell blocks.

Shaded cells cannot form a 2x2 area. There are no wall segments on cells containing numbers.

Additionally, if there is an unshaded cell orthogonally adjacent to a given clue that contains an even digit, then there can be no even digits in that unshaded cell if it were represented as a Tapa clue in the final solution. No such restriction applies for two unshaded cells without givens that are orthogonally adjacent.

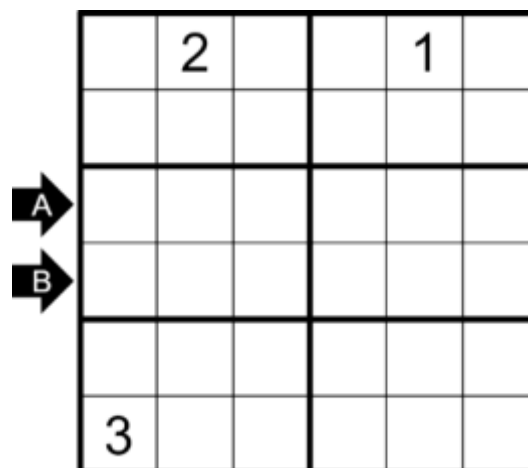


## 07 Non Consecutive Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

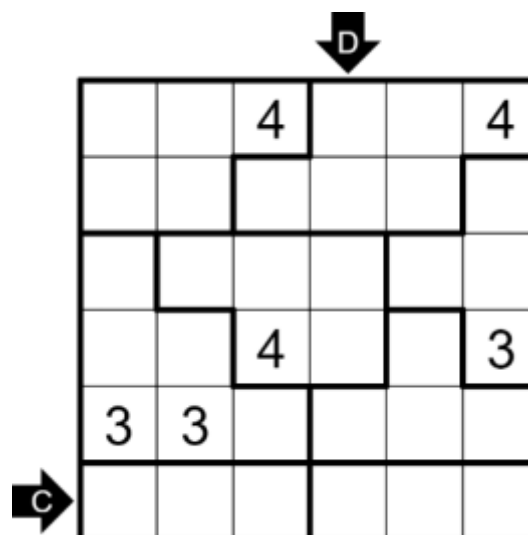
No adjacent cell pairs (sharing an edge) can contain digits which are consecutive to each other.

*These people seem to have thrown all their negative constraints at this one type. It does seem to work well with them though for the most part.*



## 08 Nanro where consecutive digits can touch!

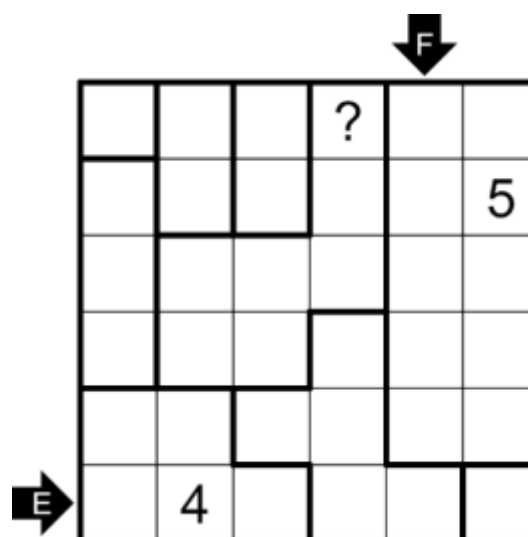
Follow regular Nanro rules as below, except, well, I guess the title says it all.



## 09 Nanro

Label some cells with numbers to form a single connected group of labeled cells; no 2x2 group of cells may be fully labeled. Each bold region must contain at least one labeled cell. Each number (including any given numbers) must equal the total count of labeled cells in that region. When two numbers are orthogonally adjacent across a region boundary, the numbers must be different.

Consecutive digits cannot touch orthogonally. A '?' stands for any nonzero digit, and just means that that cell must contain a digit.



## 10 Odd Even Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

Additionally, shaded squares contain Even digits (2,4,6) while shaded circles contain Odd digits (1,3,5).

4				●	1
●		■			■
		6	4	■	
	■	5	3		
■			●		●
5	●			■	2

## 11 Fillomino

Follow regular Fillomino rules as below.

*I guess this still counts as a valid Fillomino but it does feel a bit empty without the odd-even decorations.*

10					
8					
6					
4		8			4
					10
					4

## 12 Fillomino

### XX points

Divide the grid along the dotted lines into polyominoes so that no two polyominoes with the same area share an edge. Each given number must represent the area of the polyomino it belongs to. A polyomino may contain zero, one, or more of the given numbers.

Additionally, shaded squares contain Even digits while shaded circles contain Odd digits.

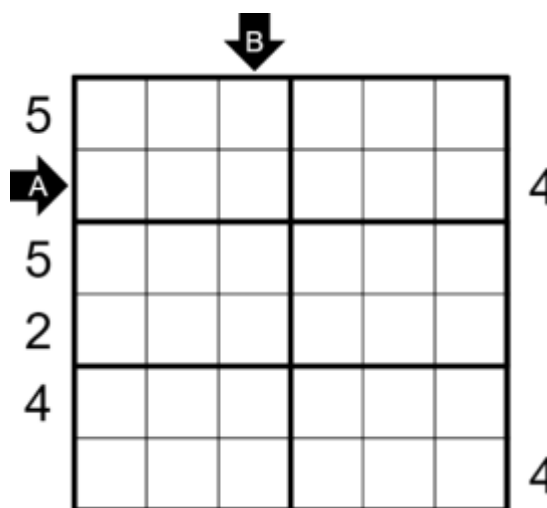
			●		■
	4				
2			2		5
	■			2	
■			■		1
5		■		●	

## 13 Skyscraper Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

Consider each number to be the height of a building. The numbers outside the grid indicate how many buildings can be seen when looking in that direction (taller buildings conceal smaller buildings behind them).

*Using heights on numbers instead of shaded blocks? Well, actually that does seem to work well, who'd have thought that was the case?*

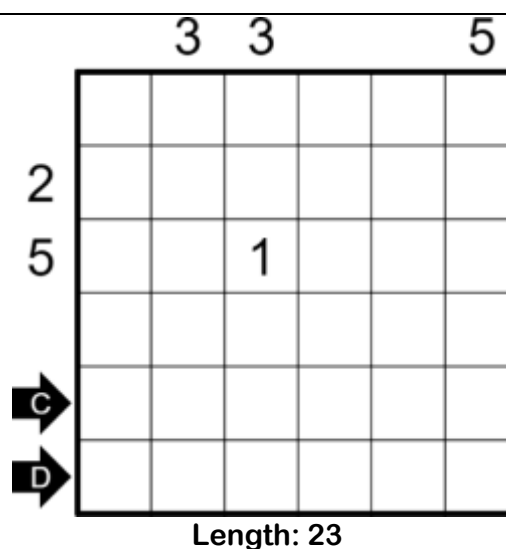


## 14 Cell-Count Snake

Locate a snake (a 1 cell-wide single continuous path) in the grid. The snake does not touch itself, even diagonally. Numbers outside the grid indicate the number of snake cells in that row/column.

The length of the Snake is fixed and will be given below the puzzle. The Snake's head is given.

*You know what you get when you just give number of snake cells instead of treating their groups as heights? You get the feeling of needing to give the length of the snake and stuff, that's what.*

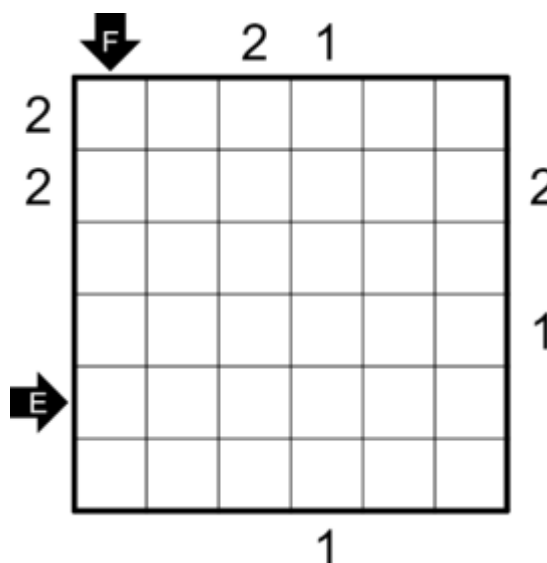


## 15 Snake

Locate a snake (a 1 cell-wide single continuous path) in the grid. The snake does not touch itself, even diagonally.

The lengths of shaded blocks along a row are considered as "heights" and the clues outside are skyscraper clues that give the number of heights that can be observed from that direction. Heights are blocked by other heights of same or higher value

The snake's length is unknown & neither head nor tail are given.

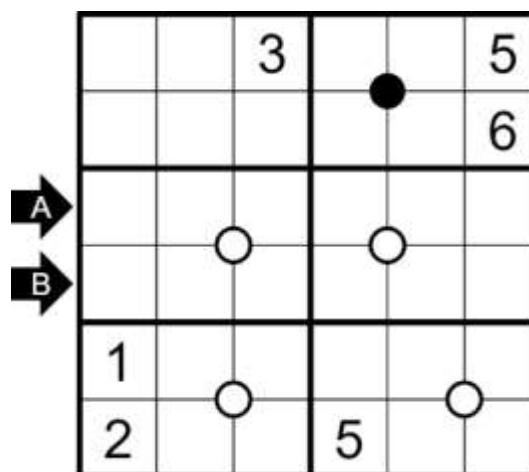


## 16 Clock Faces Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

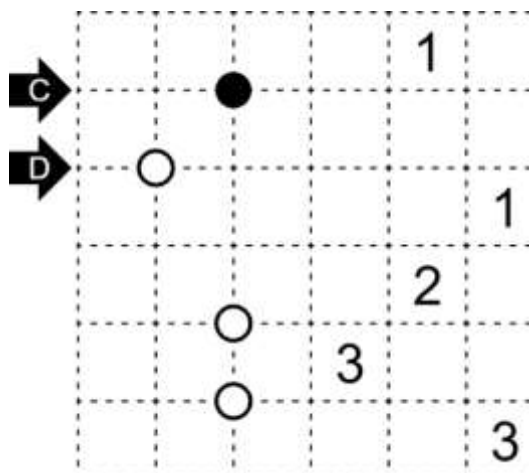
Around white dots, the digits increase in a clockwise direction, and around black dots the digits increase in a counter clockwise direction. Not all such dots are given.

*I actually like this one. I still feel our loop directions thing is simpler though.*



## 17 Loop the Loops with 3s just being 3s

Follow regular Loop the Loops rules as below but now the circles have been turned into 3s and their direction is unknown.

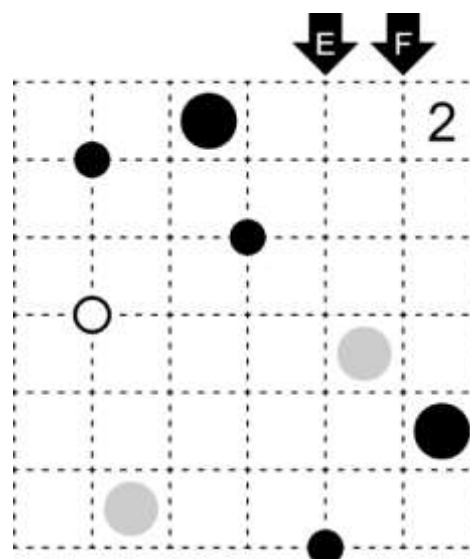


## 18 Loop the Loops

Draw a single, non-intersecting loop by connecting dots horizontally and vertically. The loop passes through all given dots. The loop must go straight through the white dots, with a turn in at least one of the cells immediately before/after each white dot. The loop must make a turn in all the black dot, but must go straight in both cells immediately before/after each black dot.

The numbers 0,1,2 indicate how many of the segments around it are used by the loop.

The 3s are all replaced by grey and black circles. Grey circles mean the loop must turn around it in a clockwise direction, black circles mean the loop must turn around it in a counter clockwise direction. The direction of the loop is not given.



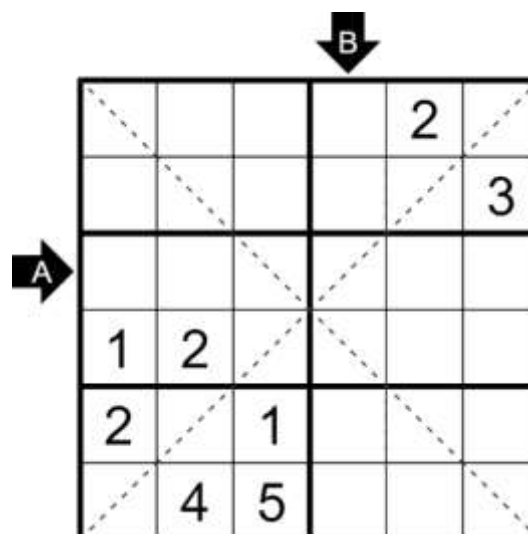


## 19 Diagonal Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

Additionally, each main diagonal (marked by dotted lines) must contain digits from 1-6.

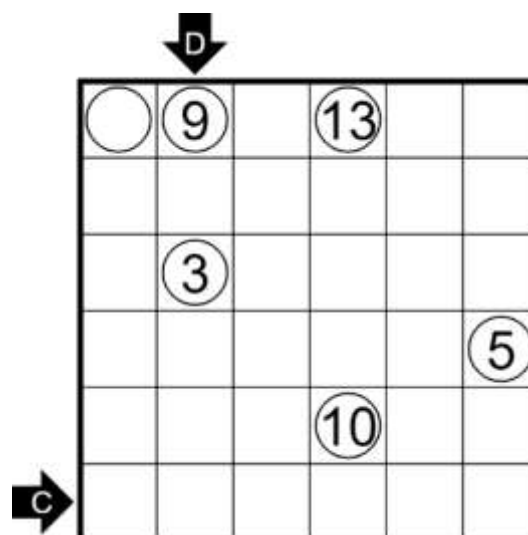
*That's a lot more digits to keep track of along the diagonals than we're used to!*



## 20 Kurotto without the diagonal constraints

Follow regular Kurotto rules as below.

Now you don't need to worry about any repeating digits or anything like that. In fact you don't even have to label the shaded groups!

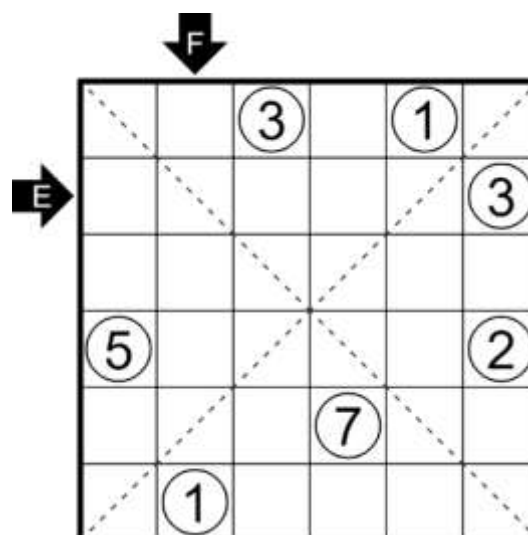


## 21 Kurotto

Shade some empty cells and label them with the total number of cells covered by that group, so that A) each circled number indicates the total number of shaded cells in connected groups sharing an edge with that number, and B) no digit can repeat along each of the marked diagonals, even if it belongs to the same group.

Cells with circles cannot be shaded.

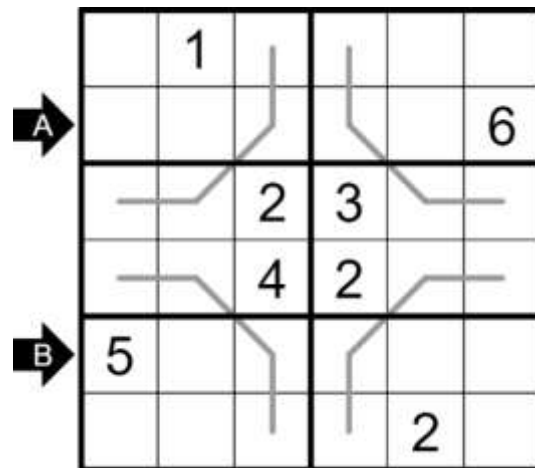
*The other Prasanna told me he recently needed to come up with some Kurotto variants and didn't even come up with this one. I'm curious to see what else he could possibly have thought of if not something as obvious as this!*



## 22 Palindrome Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

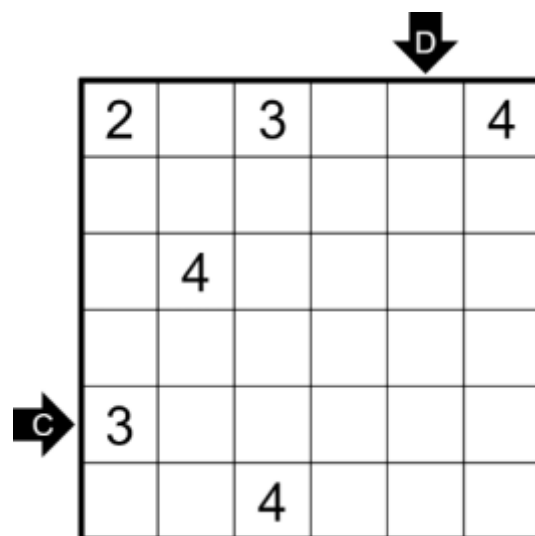
Additionally, the digits in the cells with the line form palindromes, i.e. they read the same from both the directions.



## 23 Höhle

Follow regular Höhle rules as below.

*I guess, like Odd Even Fillomino, this is still a valid Höhle puzzle, that just happens to use only directly given digits.*

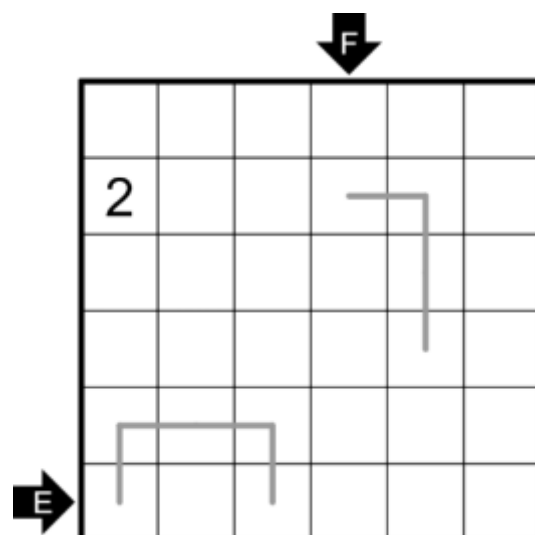


## 24 Höhle

Shade some cells to leave behind a single connected group — the cave — with no enclosed shaded cells. In other words, all shaded cells must be connected by other shaded cells to an edge of the grid.

The cave cannot fully cover any 2x2 area.

All numbered cells and grey lines must be a part of the cave, with each number indicating the total count of cells connected vertically and horizontally to the numbered cell including the cell itself. For each grey line, all cells along it must be a part of the Cave and the digits placed there by visibility rules must form a palindrome i.e. Read the same from both sides.



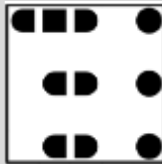
## 25 Even Sandwich Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

Wherever there is exactly one digit sandwiched between two even digits, that single digit is given outside as a clue. If there is no clue this does not occur at all in that row/column. Clues are given in the order in which they appear along that direction.

*Those pesky negative constraints again..*

## 26 Segment Count Battleships

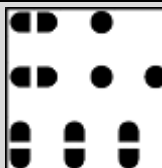


Follow regular Battleship rules as above, except for the part about the numbers outside.

The numbers outside the grid indicate the number of cells occupied by ships in that row or column.

*These people also love their cell/segment counting outside clues.*

## 27 Battleships



Place the given fleet of ships with the shapes of the ships as shown. Each segment of a ship occupies a single cell. Ships can be rotated. Ships cannot touch each other, not even diagonally. Some cells are known to be water and are indicated by waves. Some ship segments may already be given.

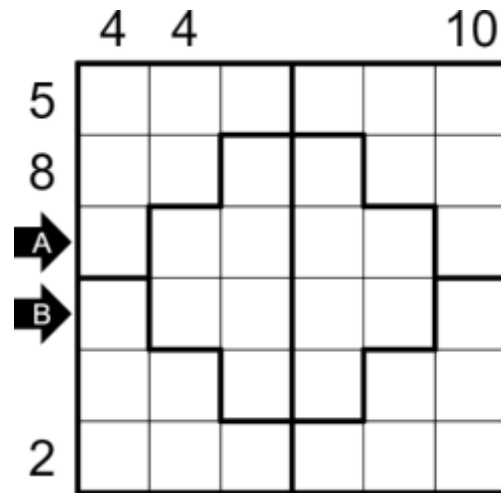
Instead, the clues outside give the number of non-ship cells between two even-cell ship segments in that direction. In case of multiple clues, they are not necessarily in order. All outside clues are NOT necessarily given.

## 28 Irregular Doppelblock Sudoku

Place 1-4 and two shaded cells in each row, column and each outlined region marked by thick borders.

Numbers outside give the sum of digits between the shaded cells in that row or column.

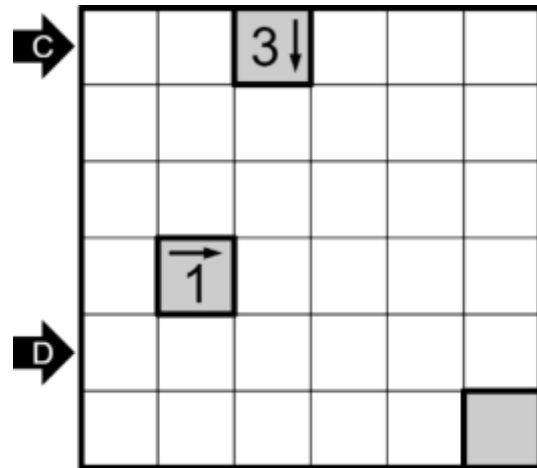
*This variant seems to be a stretch from their usual Sudoku stuff. Might be a hybrid perhaps.*



## 29 Black Cell Count Yajilin

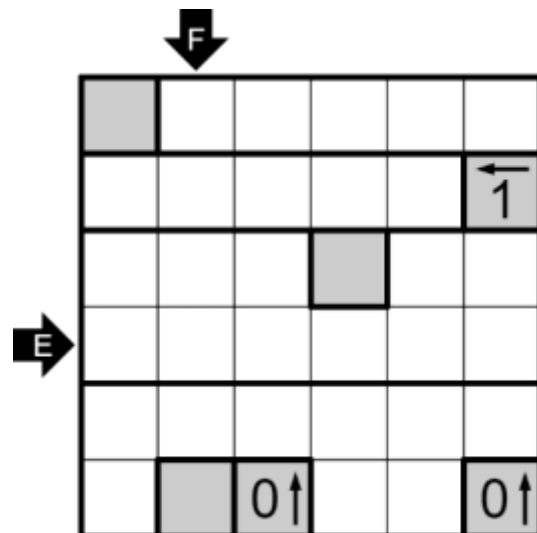
Blacken some white cells and draw a closed loop passing through centres of all remaining white cells horizontally or vertically. Blackened cells cannot share an edge with each other. Some cells are outlined and in grey and cannot be part of the loop. Numbered arrows in such cells indicate the total number of blackened cells in the direction pointed at by the arrow.

*Again with the cell counts.*



## 30 Yajilin

Place two black cells in each outlined region and then draw a loop passing through the remaining white cells as in regular Yajilin. An arrowed clue means that A) there are exactly two black cells in that direction and B) the number gives the sum of lengths of loop segments between those two black cells along that direction. Arrowed clues do not block sight of other arrowed clues.



01 Anti Knight Sudoku

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

02 Nurikabe without Anti Knight Constraints

		2		
3				1
		4		

03 Nurikabe

			1	
10				

04 No Even Neighbours Sudoku

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

05 Tapa with Even Neighbours

		1 <sub>3</sub>			1
6					1 <sub>3</sub>
		1 <sub>3</sub>			

06 Tapa

3		7		5	
1 <sub>2</sub>		1 <sub>2</sub>			
			2 <sub>4</sub>	7	
2	3			3	2

07 Nonconsecutive Sudoku

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

08 Nanro where consecutive digits can touch

4	4	4		4	4
4			4	4	
3	4	4		3	3
		4	4		3
3	3		2		2
	2	2	3	3	3

09 Nanro

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

10 Odd Even Sudoku

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

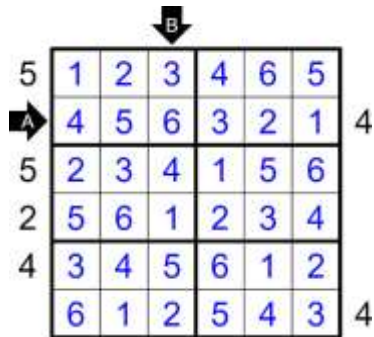
11 Fillomino

10	10	10	10	10	4
8	8	8	8	10	4
6	6	8	8	10	4
4	6	8	8	10	4
4	6	6	4	10	10
4	4	6	4	4	4

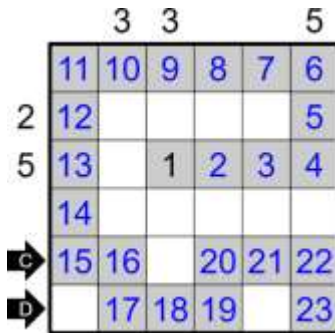
12 Fillomino

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

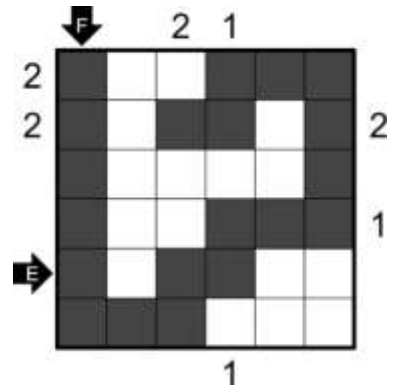
13 Skyscraper Sudoku



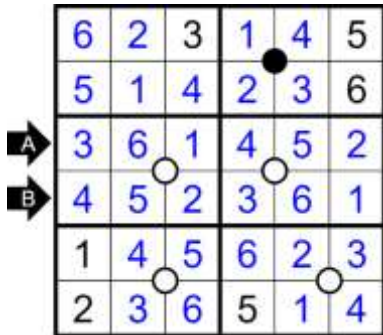
14 Cell Count Snake



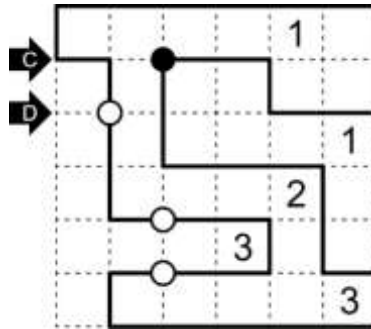
15 Snake



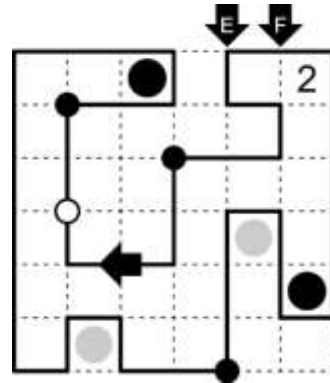
16 Clock Faces Sudoku



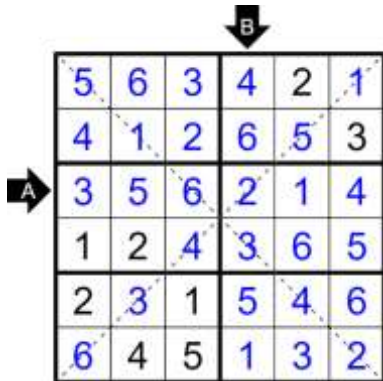
17 Loop the Loops with 3s just being 3s



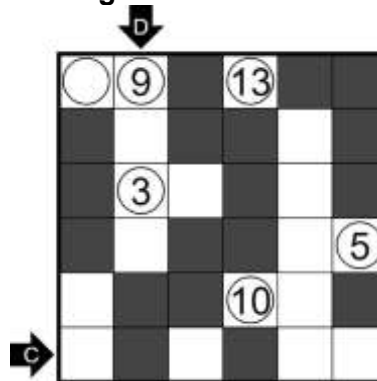
18 Loop the Loops



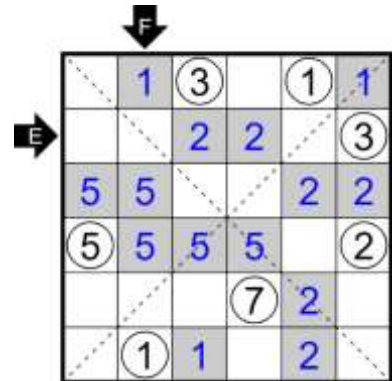
19 Diagonal Sudoku



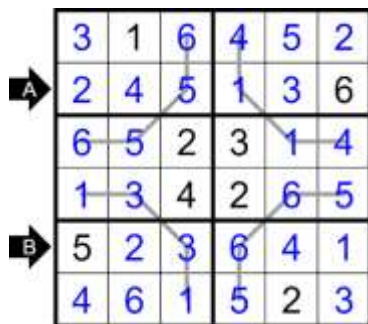
20 Kurotto without the diagonal constraints



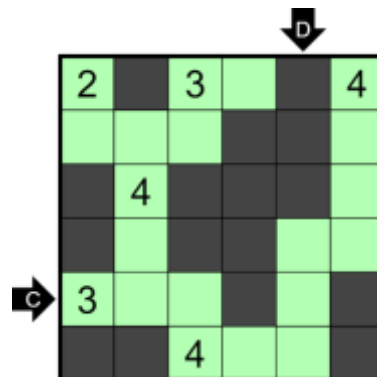
21 Kurotto



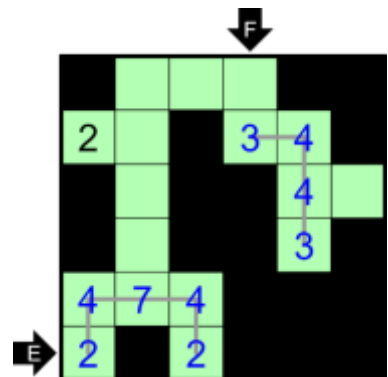
22 Palindrome Sudoku



23 Höhle



24 Höhle



25 Even Sandwich Sudoku

				1	1
	2	↓	3	3	
1	2	1	6	3	5
→	4	5	3	6	2
5	1	3	6	5	4
5	1	2	4	5	6
	5	4	2	1	3
	6	3	1	2	4

26 Segment Count Battleships

		3		5
2	⌊	●	⌊	⌊
	⌊	⌊	⌊	⌊
4	●	●	●	●
	⌊	⌊	⌊	⌊
	●	⌊	⌊	⌊

27 Battleships

		1		
		2		
	⌊	⌊	⌊	⌊
	⌊	⌊	⌊	⌊
2	⌊	⌊	⌊	⌊
	⌊	⌊	⌊	⌊
	⌊	⌊	⌊	⌊
	⌊	⌊	⌊	⌊

28 Irregular Doppelblock Sudoku

	4	4		10
5	3	2	1	4
8		1	3	4
→	4		2	1
→		4	2	3
	2		1	3
2	1	3	4	2

29 Black Cell Count Yajilin

→			3	
	⌊	⌊	⌊	⌊
	⌊	⌊	⌊	⌊
→	1			
	⌊	⌊	⌊	⌊
	⌊	⌊	⌊	⌊

30 Yajilin

				1
→				
		0		0

All in all, I think Sudoku could be a genre we can use sporadically too, and some of these variants do seem to fit with it. I recommend that people try out these weird new puzzles like the Yajilin where the numbers give number of black cells, it will do your head in, but in a good way!

