WPF SUDOKU/PUZZLE GRAND PRIX 2019

ROUND 2

WPF PUZZLE GP 2019 COMPETITION BOOKLET

Host Country: Germany

Jonas Gleim, Robert Vollmert

Special Notes: In the brackets after the puzzle name, **J** stands for Jonas Gleim and **R** stands for Robert Vollmert.

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1. Word Search [J] (75 points)

Locate the list of words in the grid. Words always appear in a line in one of the eight standard directions. Some letters in the middle of the grid (inside the dotted lines) are missing and you must discover what they are while solving.

Answer: Enter the missing letters from top row to bottom row, entering each row in order from left to right.

Example Answer: RALA

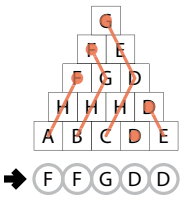
GLAD
SAD
BAD
DRAB

THE
TWENTYEIGHTH
FOURTEENTH
WORLD
PUZZLE
SUDOKU
CHAMPIONSHIP
WSPC
WILL
TAKE
PLACE
FROM
SEPTEMBER
TWENTYNINTH
UNTIL
OCTOBER
SIXTH
TWOTHOUSAND
NINETEEN
KIRCHHEIM
HESSEN
GERMANY

1

							P	B	W															
								R	V	N								P	Z	L				
							Y	M	J	A	Z			L	R	T	O	B	A					
						H	T	N	I	N	Y	T	N	E	W	T	V	G	M	Y				
			S			E	D	E	A	Q	W	O	R	L	N	E	S	C	P	T				
		C	P	I	S	E	S	L	M	C	M	Q	N	P	H	T	X	I	S					
		H	O	V	S	N	S	I	X	R	S	I	J	T	B	E	L	O						
		A	N	E	E	T	E	N	I	N	E	A	H	W	X	A	S	N						
	Q	M	Z	R	O	H	R	J	L	D	K	G	V	O	C	T	O	S	B					
		P	U	D	H	X	M	T	W	O	I	U	C	T	J	S	U	H	E	O				
		J	U	C	U	S	T	L	I	E	Z	T	H	H	L	D	N	I	C	N				
N	R	S	R	L	D	T	Z	W	Y	M	O	K	R	O	C	D	F	P		G				
	R	I	B						T	B	P	V	Y	U	A	C	F							
	K	X	M						Z	L	F	L	N	S	H									
	O	T	E						A	S	O	P	A	A										
	B	T	T						I	Z	U	L	M	N	V									
		H	P						A	L	R	P	R	D	T									
X	B	E	C	Q	G	H	K	R	T	I	G	E	P	S	O									
	T	S	O	S	J	L	T	B	O	C	T	O	E	W	X	W								
			J	S	E	M	W	N	F	M	G	P	Q	O	L	J	T							
					W	E	S	T	E	Y	T	U	E	L	Z	Z	U	P						
					I	H	T	M	W	E	I	E	C	R	I	K	W	X						
				H	I	R	U	E	M	E	T	A	P	D	O	Y								
				P	L	A	C	B	N	D	N	R	F	D	X									
			Y	B	L	Q	E	U	X	I	U	T	U	S										
			O	W	E	R		Z	A	O	N	S	X	O	L									
									F	V					F	W								

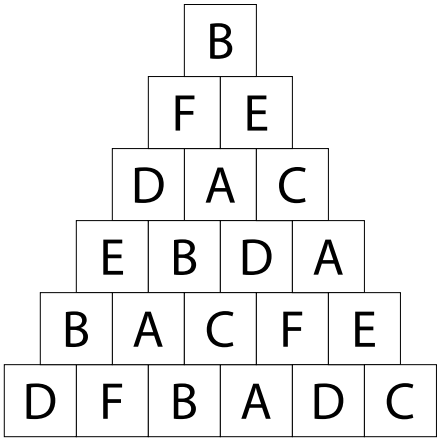
2-4. Pyramid Climbers [JJR] (10, 13, 12 points)



Each cell at the bottom of the pyramid has a "climber" associated with it. Each climber climbs up a path of adjacent cells. For each path, all the letters in that path's cells are distinct. (Climbers do not climb sideways.) Each cell is reached by exactly one climber. Determine the paths of all climbers.

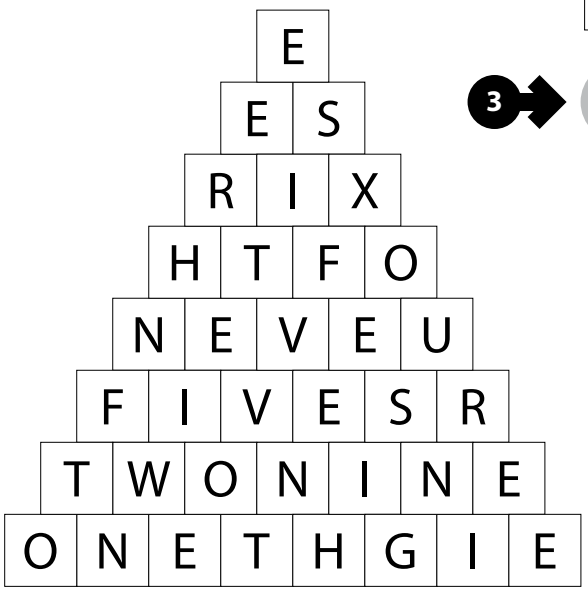
Answer: For each climber (going from left to right), enter the top-most letter on its path.

Example Answer: `FFGDD`



2 ➔ ○○○○○

3 ➔ ○○○○○○○○



4 ➔ ○○○○○○○○

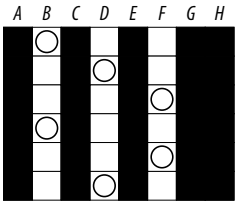
5-7. Column Dance [JJR] (9, 5, 8 points)

Remove some columns so that there is exactly one symbol in each row.

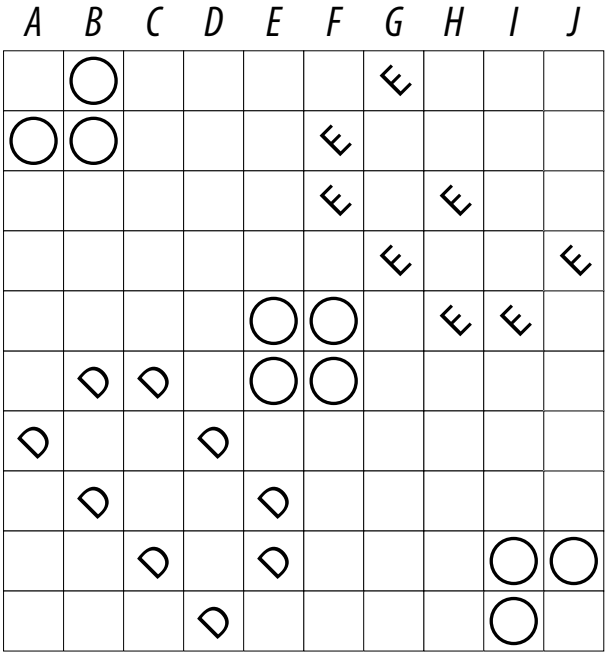
Any difference between the symbols or cell lines are purely for decorative purposes.

Answer: Enter the letters above the non-removed columns, from left to right.

Example Answer: BDF



5



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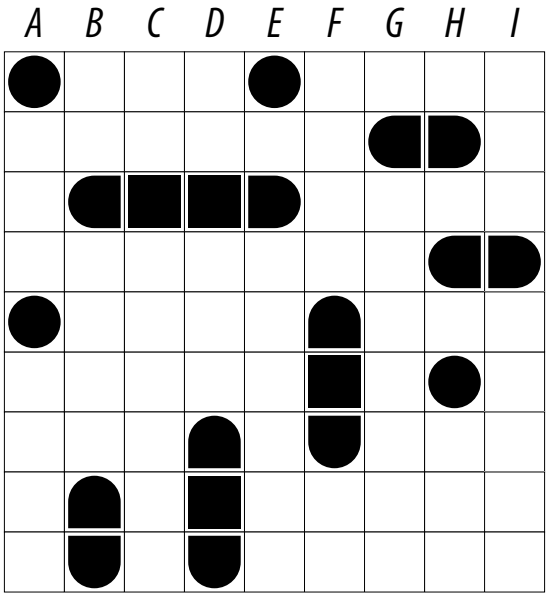
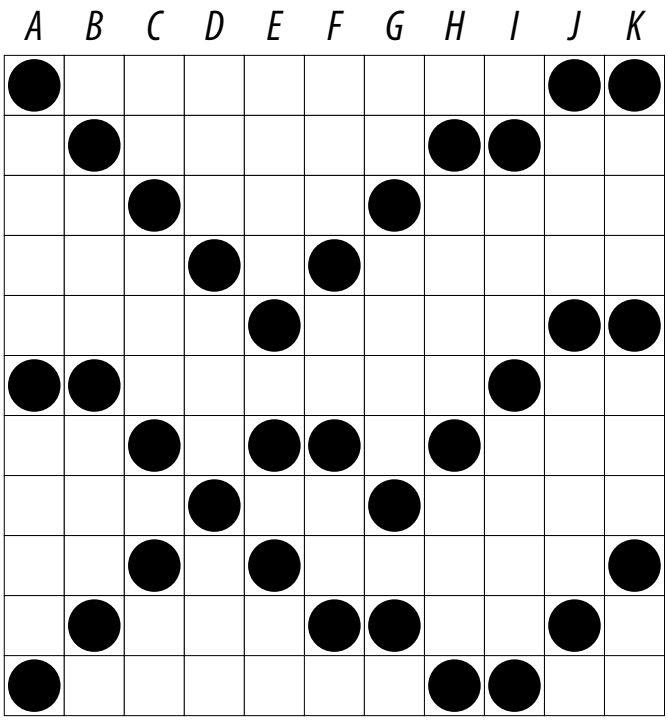


7



8-9. Gaps (No Touch) [RJ] (17, 27 points)

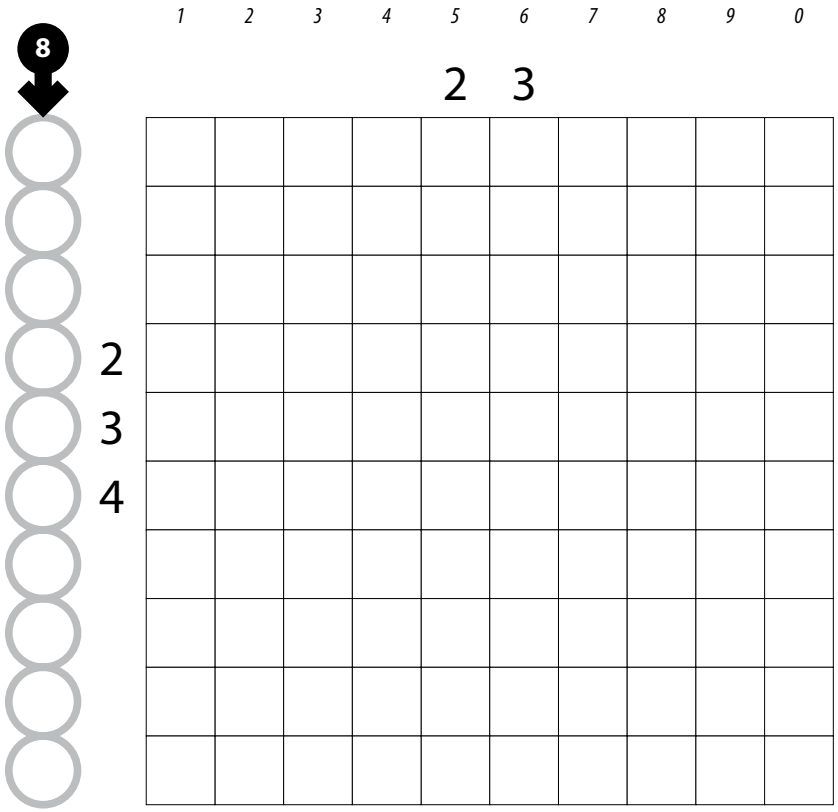
Blacken some cells in the grid such that each row and each column contains exactly two blackened cells. The numbers to the left of (or above) the grid indicate the number of unblackened cells between the blackened cells in that row (or column). Blackened cells may not touch each other, not even diagonally.

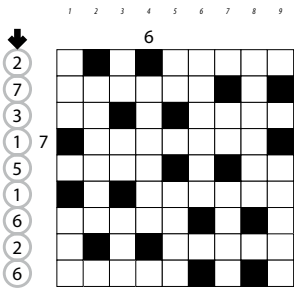
The numbers on the far top of the diagram are for Answer purposes only.

Answer: For each row from top to bottom, enter the number of the first column from the left where a blackened cell appears (the number on the far top of that column). Use only the last digit for two-digit numbers; e.g., use '0' if the first blackened cell appears in column 10.

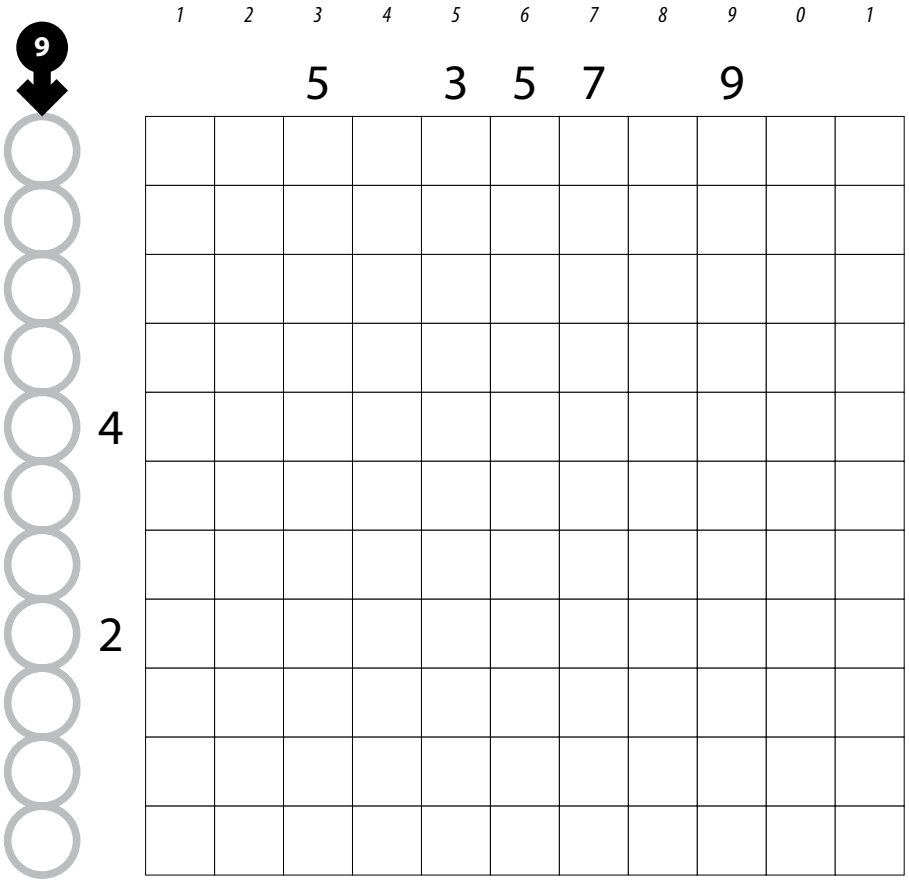
Example Answer: 273151626

8





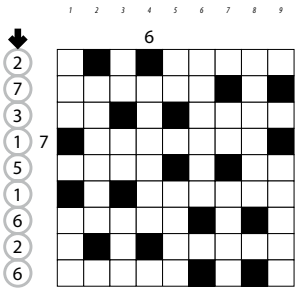
9

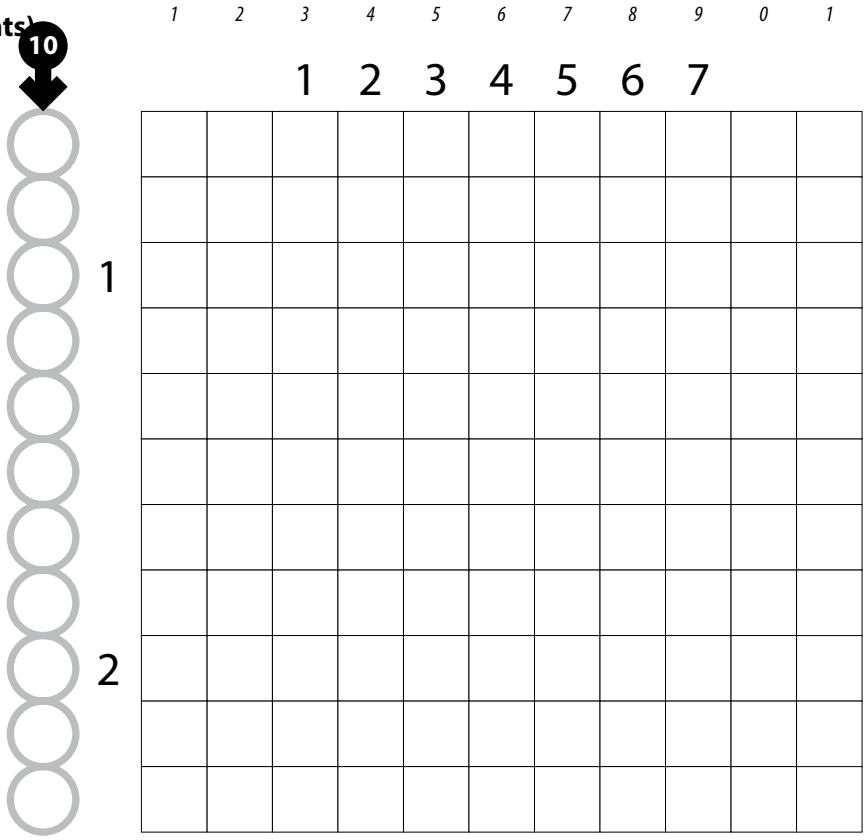


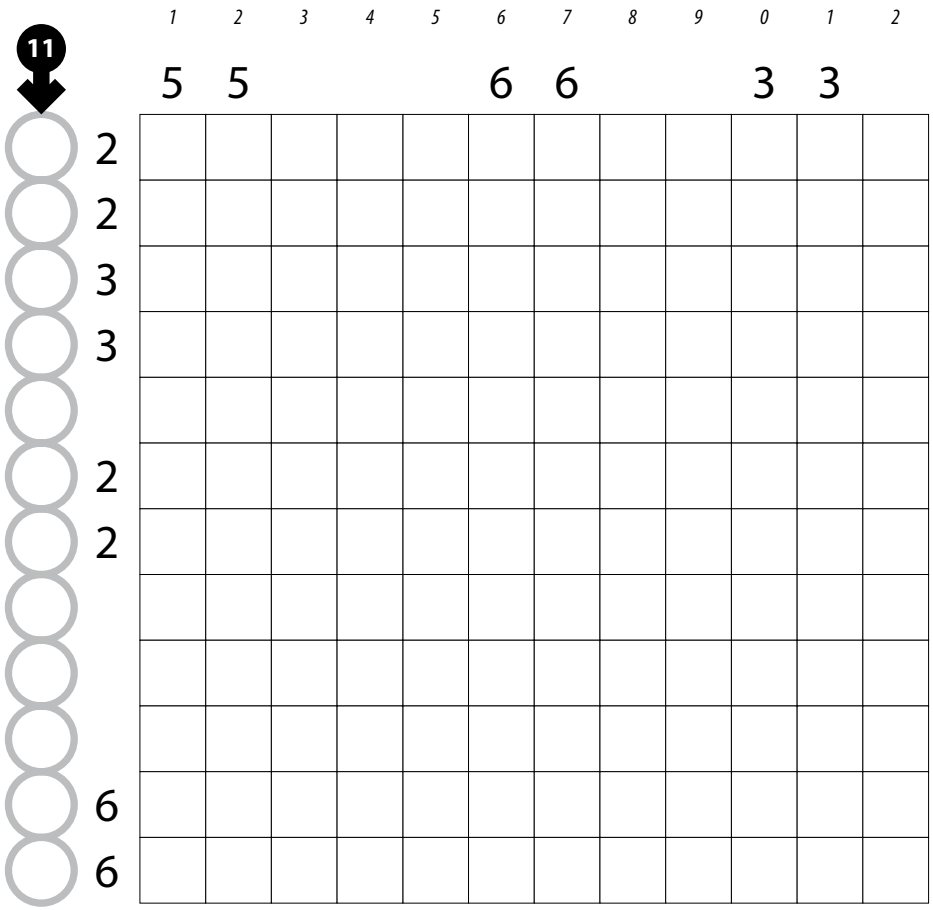
10-11. Gaps (No Touch) [RR] (28, 49 points)

Answer: For each row from top to bottom, enter the number of the first column from the left where a blackened cell appears (the number on the far top of that column). Use only the last digit for two-digit numbers; e.g., use '0' if the first blackened cell appears in column 10.

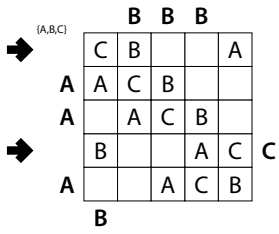
Example Answer: 273151626







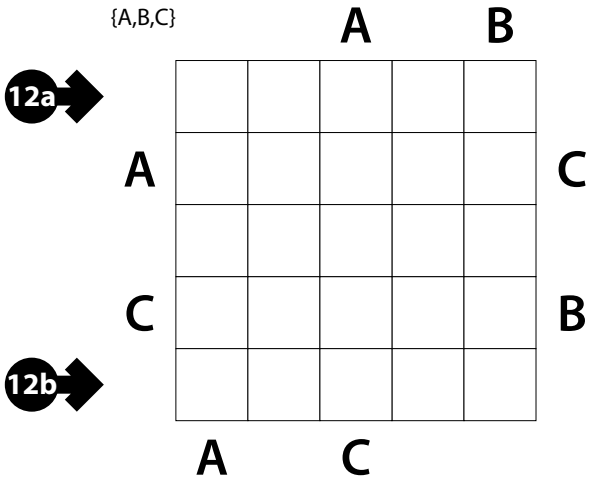
12-14. Easy As... [JJR] (4, 13, 21 points)

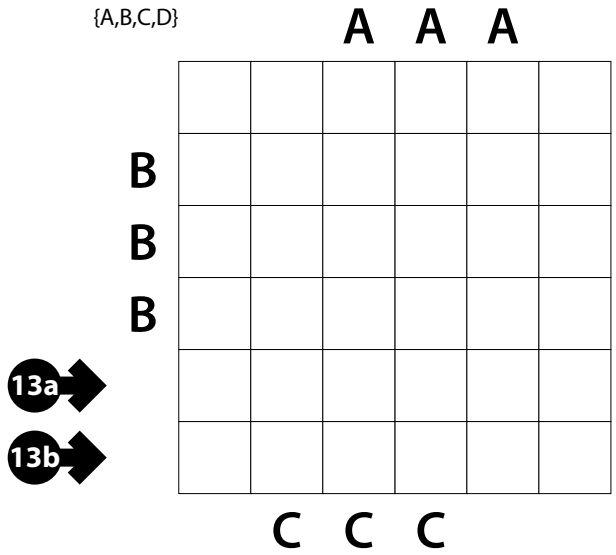


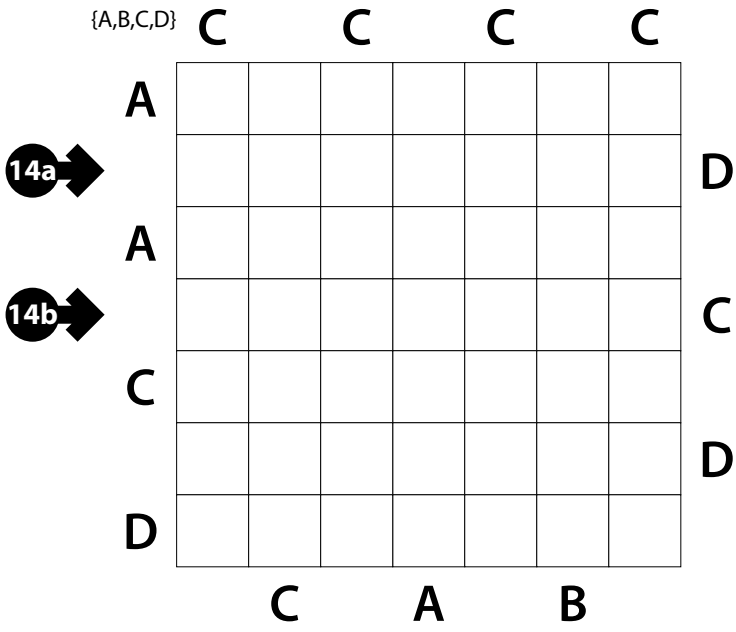
Place letters of the specified list into some cells, no more than one letter per cell, so that each letter appears exactly once in each row and column. The letters outside the grid indicate the first letter that can be seen in the respective row or column from the respective direction. Some letters may already be filled in for you.

Answer: For each designated row, enter its contents. Do *not* include any letters outside the grid. Use 'X' for an empty cell.

Example Answer: CBXXA, BXXAC



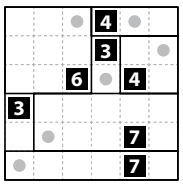




15-18. Recto [JRRR] (10, 11, 19, 7 points)

Divide the grid into rectangles (squares are considered rectangles) along the grid lines such that each cell is in exactly one rectangle and each rectangle contains exactly one given number. The number must equal the sum of the height and width of the rectangle (in cells).

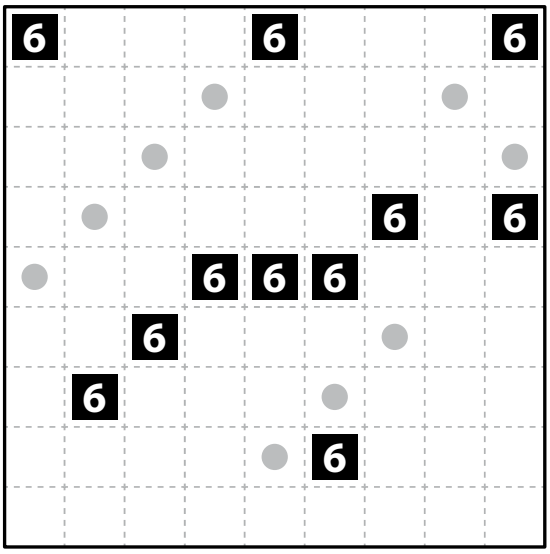
The dots in cells are only used for entering your answers.



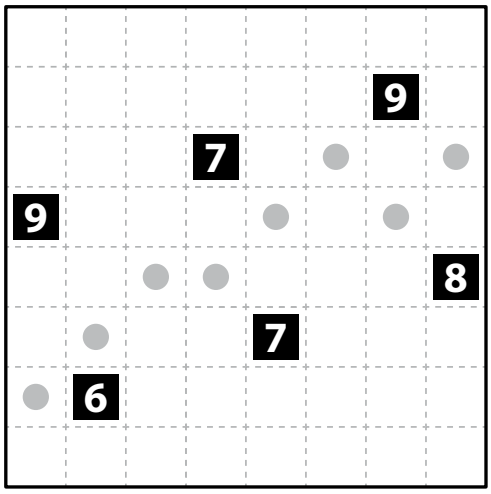
➜ 1 2 3 2 1 2

Answer: Enter the *height* of each rectangle each dot is in, reading the dots from left to right. (Ignore which row the dots are in.) Use only the last digit for two-digit numbers; e.g., use '0' for a rectangle with a height of 10.

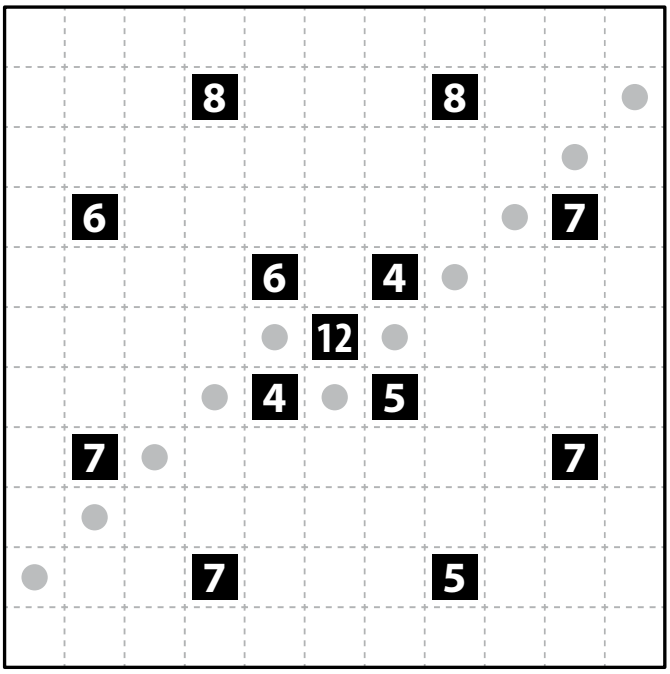
Example Answer: 123212



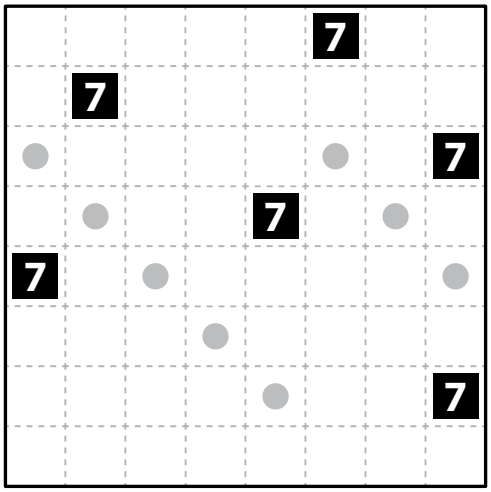
15 ➜



16 ➜



17 ➜



18 ➜

19-20. Meandering Numbers [RR] (28, 20 points)

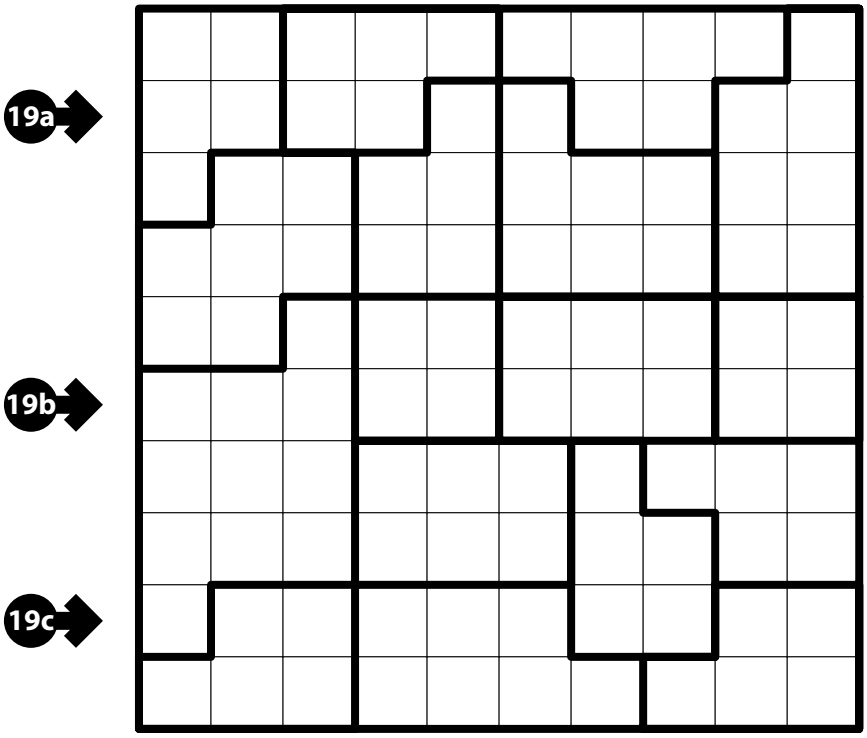
Place a number into each empty cell so that each cell has exactly one number and cells that contain the same number do not touch each other, not even diagonally. Each outlined area must contain the numbers from 1 to N (where N is the size of the outlined area in cells) such that consecutive numbers within an outlined area are orthogonally adjacent. (In other words, for each region it must be possible to draw a path that starts at 1 and ends at N, going through each other cell exactly once and in numerically increasing order.)

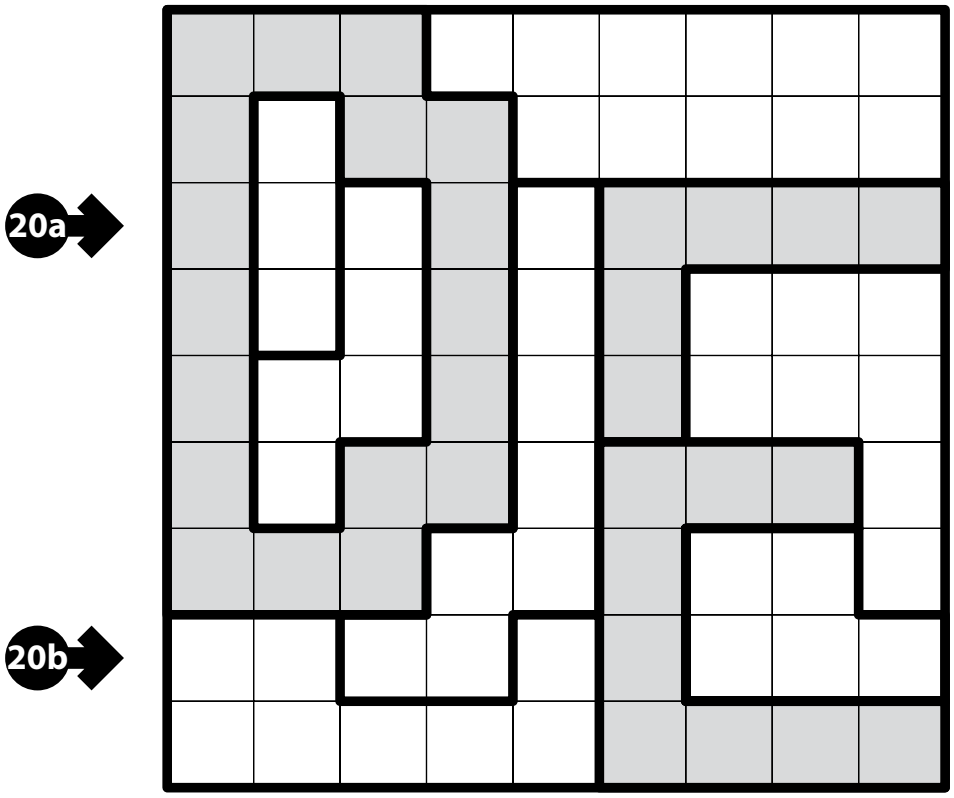
Any shading of the regions is purely for decorative purposes.

Answer: For each designated row, enter its contents. Use only the last digit for two-digit numbers; e.g., use '0' for a cell containing the number 10.

Example Answer: `35671,13293`

3	5	6	7	1
2	4	1	8	2
1	3	2	9	3
5	6	1	4	1
4	3	2	3	2





21-22. Meandering Numbers [RR] (34, 56 points)

Answer: For each designated row, enter its contents. Use only the last digit for two-digit numbers; e.g., use '0' for a cell containing the number 10.

Example Answer: 35671,13293

3	5	6	7	1
2	4	1	8	2
1	3	2	9	3
5	6	1	4	1
4	3	2	3	2

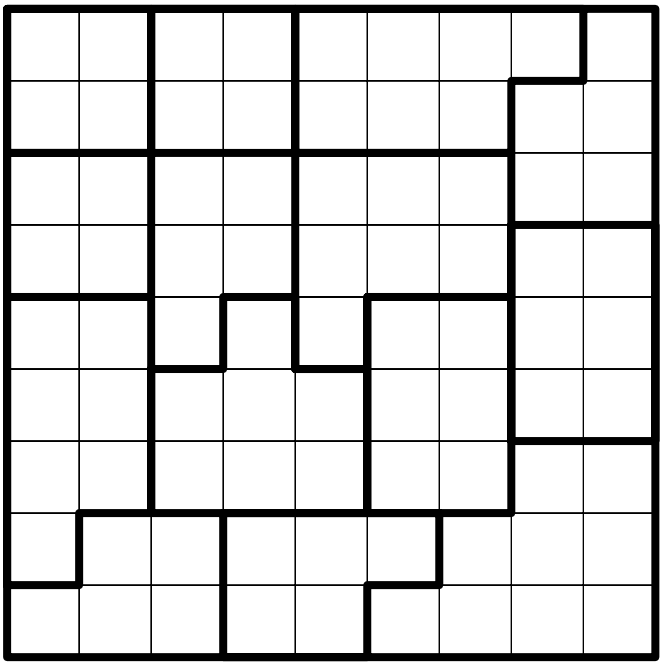
21a

21b

	1			9			1	
		7				9		
	6							
4								2
							8	
		9				7		
	5			3			3	

22a

22b

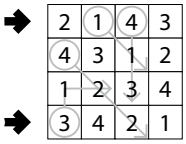


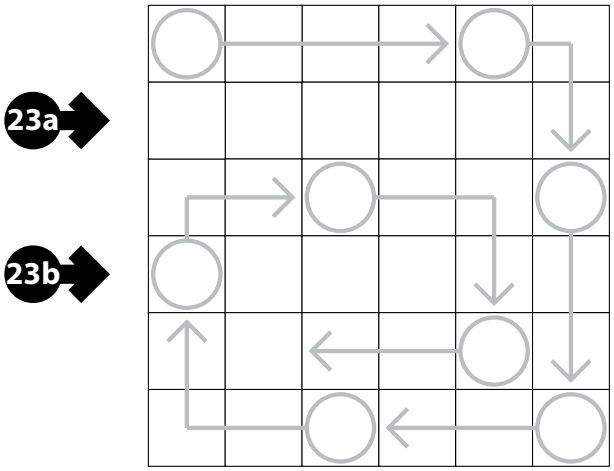
23-25. Arrow Latin Square [JRJ] (11, 14, 19 points)

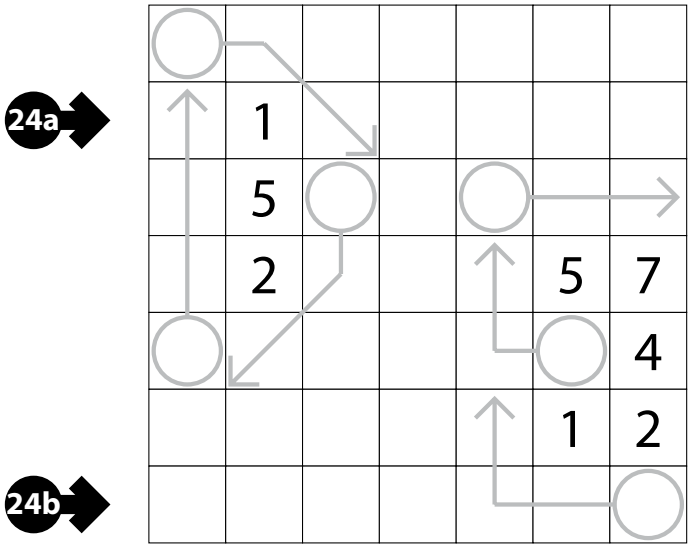
Place a number from 1 to X (integers only) into each cell so that each number appears exactly once in each row and column. (X is the number of cells in each row.) Some arrow shapes are in the grid; the sum of the numbers along the path of each arrow must equal the number in the circled cell. Numbers can repeat within an arrow shape. Some numbers may already be given to you.

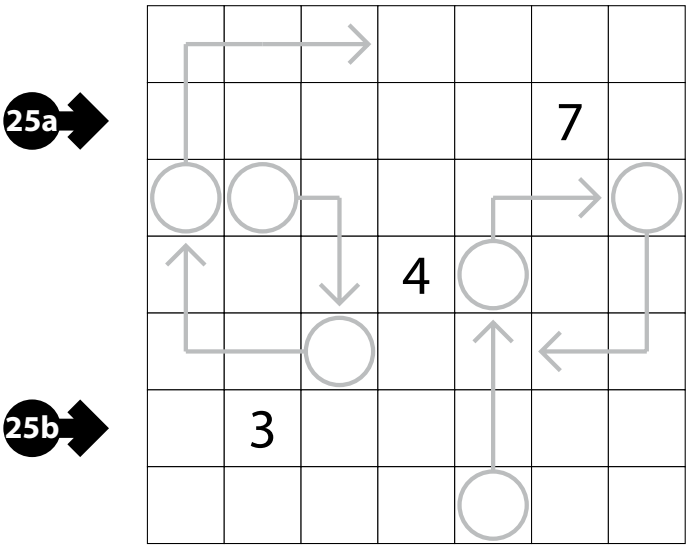
Answer: For each designated row, enter its contents. Use only the last digit for two-digit numbers; e.g., use '0' for a the number 10.

Example Answer:
2143,3421







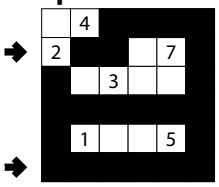


26-27. Nuraf [RJ] (24, 31 points)

Shade some empty (non-numbered) cells black (leaving the other cells white) so that the grid is divided into non-overlapping regions; cells of the same color are considered in the same region if they are adjacent along edges. Each white region must have exactly two given numbers; the area of the region (in cells) must be between those two numbers (therefore, not equal to either of those two numbers). All black cells must be in the same region. No 2×2 group of cells can be entirely shaded black.

Answer: For each designated row, enter the lengths (number of cells) of the black segments from left to right. Use only the last digit for two-digit numbers; e.g., use '0' for a black segment of length 10. If there are no black cells in the row, enter a single digit '0'.

Example Answer: 21, 6



26a

26b

		7	11						
1	4								
						2	4		
				7	11				
							4	1	
					6	2			
		5	7						
4	6								

27a

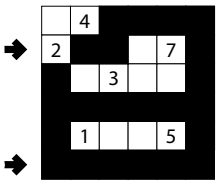
27b

					11				
	3					12			
		2							
					9			8	
	13			10					
							7		
			4					6	
				5					

28-29. Nuraf [JR] (33, 40 points)

Answer: For each designated row, enter the lengths (number of cells) of the black segments from left to right. Use only the last digit for two-digit numbers; e.g., use '0' for a black segment of length 10. If there are no black cells in the row, enter a single digit '0'.

Example Answer: 21, 6



28a

28b

			4		9		2	
			3		5		7	
	9							
			8		1		6	
5								
		7						

29a

29b

13			11			9			6
11			1			5			9
6			3			11			3
9			6			3			5

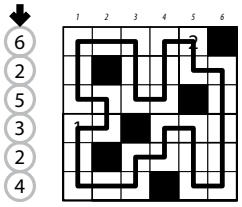
30-31. Yajilin (Regions) [RR] (19, 19 points)

Blacken some cells so that you can draw a single closed loop (without intersections or crossings) through all remaining white cells. Loop paths must be orthogonal. Blackened cells cannot share an edge with each other. The grid is divided into regions by thick borders; a number in a region indicates exactly how many cells in that region must be blackened. Numbered cells may be blackened. The number of blackened cells for a region without a number is for you to determine.

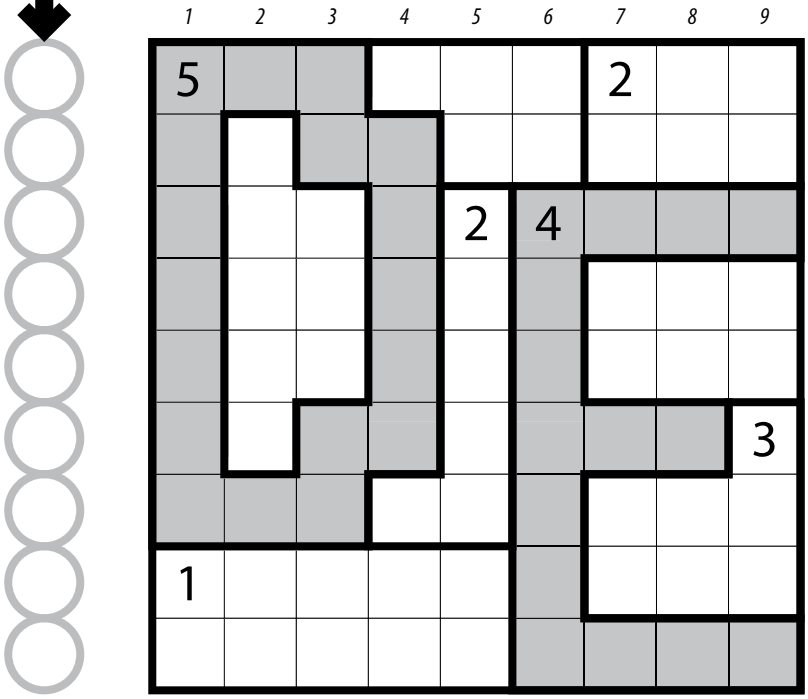
The numbers on top of the diagram are for Answer purposes only. Any shading of the regions is purely for decorative purposes.

Answer: For each row from top to bottom, enter the column number of the left-most blackened cell. Use only the last digit for two-digit numbers; e.g., use '0' for column 10. If none of the cells in a row are blackened, enter '0' for that row.

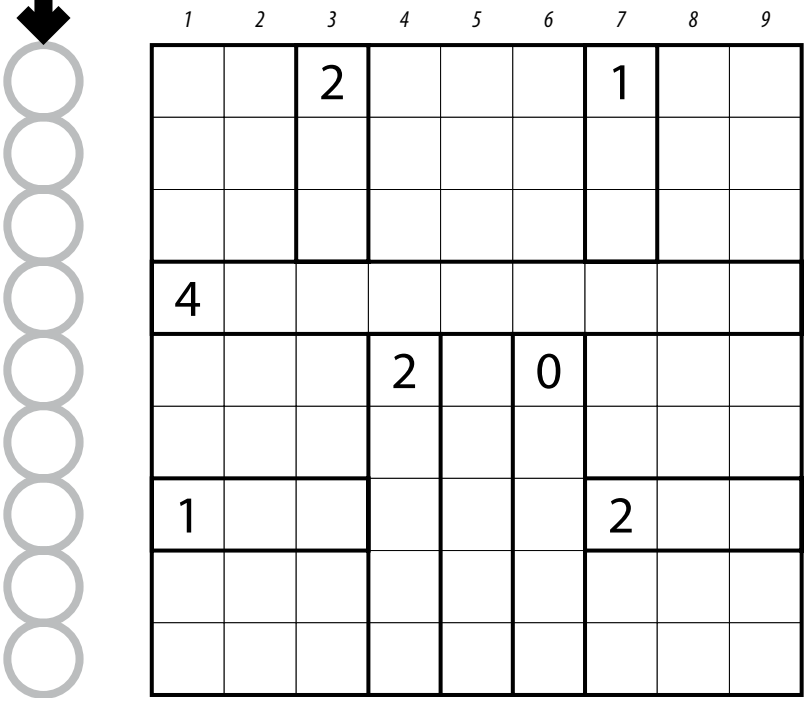
Example Answer: 625324



30



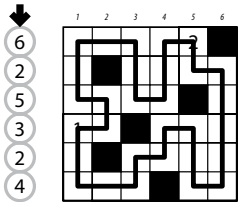
31



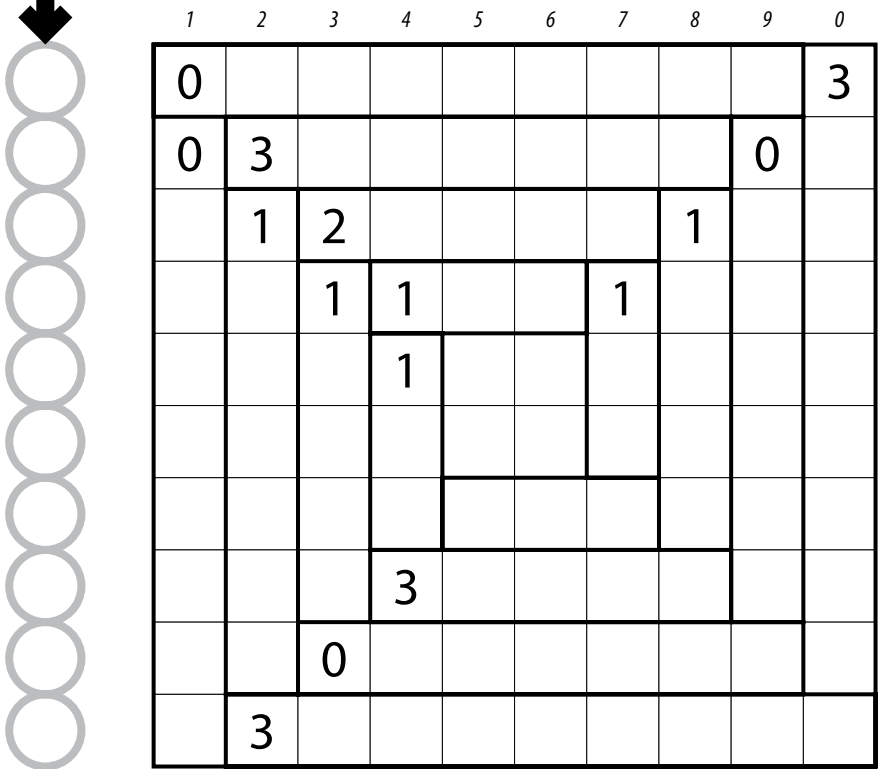
32-33. Yajilin (Regions) [RJ] (30, 57 points)

Answer: For each row from top to bottom, enter the column number of the left-most blackened cell. Use only the last digit for two-digit numbers; e.g., use '0' for column 10. If none of the cells in a row are blackened, enter '0' for that row.

Example Answer: 625324



32



33