



MASYU

Draw a single, non-intersecting loop that passes through all circled cells. The loop must go straight through the cells with white circles, with a turn in at least one of the cells immediately before/after each white circle. The loop must make a turn in all the black circles, but must go straight in both cells immediately before/after each black circle.

Answer key 1: For each marked row, enter the lengths of the longest horizontal loop segment.

Answer key 2: For each marked column, enter the lengths of the longest vertical loop segment.

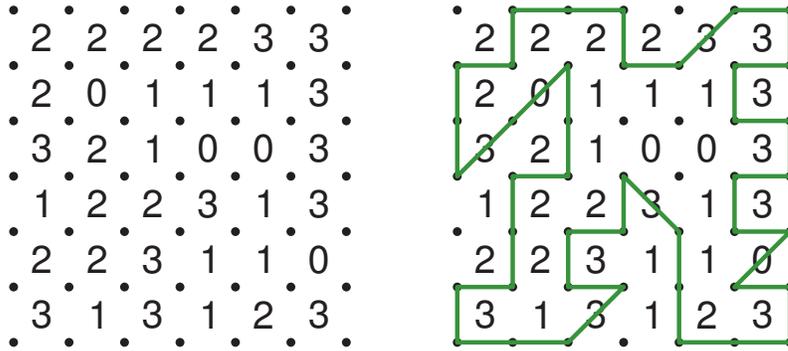
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		○	○				○	○			○		○						○
	○		○		○		○			○		○		○		○		○	
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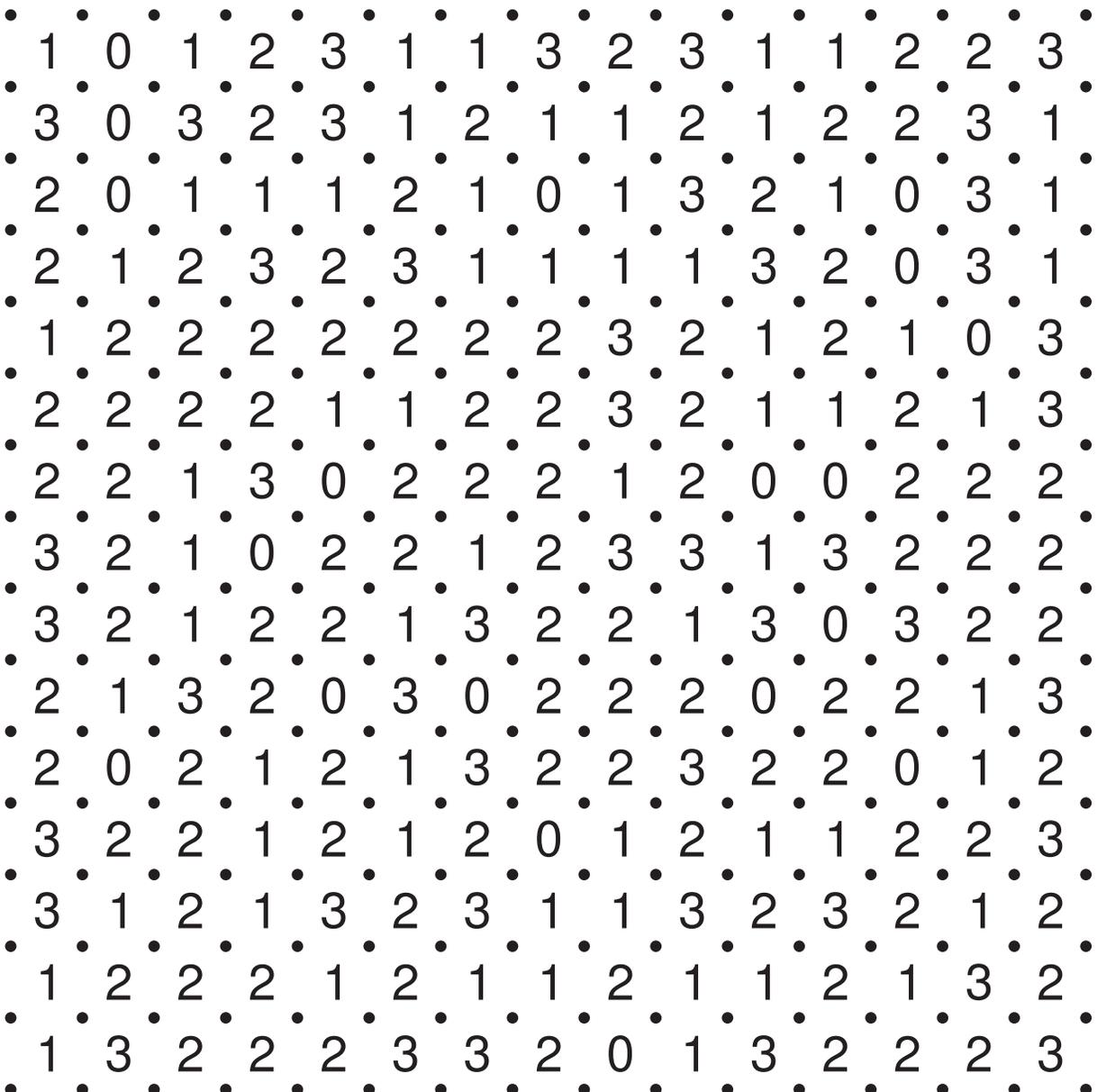
LIAR DIAGONAL SLITHERLINK

Draw a continuous loop in the grid. Numbers in the grid indicate how many of four edges of square are used by the loop. However, exactly one number in each row and each column is wrong (value of that number doesn't correspond with number of square edges used by loop).

Moreover, each square with wrong number should be crossed by loop diagonally.



Answer key: Enter the number of edges used by loop, for each cell with wrong clue, from left to right. For the example, the answer key is 111102





ARAF

Divide the grid into some regions formed of adjacent squares. Each region should contain exactly two given numbers. The size of each region should be a value (in unit squares) between the two numbers inside that region.

(Ignore the circles while solving)

Answer key: For each circle from left to right, enter the size of region. Enter only the unit digit (i.e. the right digit) for each circle.

		5	7			1	3	2			10	6			1	16	9	
	4			8		2		5		2			6		1			
	3	4	5	6		5	4			4	5	2	2		3	8	2	
	2			4		5		4		8			6		7			
	1			2		9		5		3			5		6			
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						<input type="text"/>												
		<input type="text"/>					1	5				9	15		1			
							2			14		3		2		24	2	
5			3		<input type="text"/>			5				4			8	2		20
<input type="text"/>			4					8				<input type="text"/>			9	5		
			5	6	7			9				<input type="text"/>		10	5		<input type="text"/>	
								<input type="text"/>										
	5	5	3					11	5				8		5	31	7	
					1			5			7		9	3				20
			7	7				6			4		8		<input type="text"/>	3	4	
	7							9			4			2				2
	7	6	5	2				5	4				6		5	7	18	



WATCHES

Each circle should have 1, 2, 3 or 4 arrows of given lengths. The arrows could point vertically, horizontally or diagonally from the circles. The arrows could not touch to each other or to other circles. Each empty cell of the grid should contain exactly one arrow.



(2,2)				(2,3)	1	(1,2)	(1,2)					1
		(1,2)								(1,2,3)		
	(2,3)				1	(1,2)	(1,1)				(1,2)	
		(1,2)								(1,2)		
					1							
(1,1,2)		(1,1,2)							(1,1)			(1,3,1)
					(2,2)	1						
					1	(1,1)						
(1,2)		(1,1,3)							(2,3)			(1,2)
(1,2)	(1,1,4)		(1,1,1)			(1,1,2)			(1,3,5)			
(1,2)			(1,2,3)			(1,2)						(1,2)
									(2)			
	(1,2)											
(1,2)												(2,2)
			(3)	(3,7)		(2,3)		(2)	(3)			
			(2)	(1,1)		(1,2)		(1,2)	(3)			
(1,1,1)												(1,2,6)
									(1,2)			
		(1,2)										
(1,2)				(1,1)			(2,2,2)					(1,2)
		(1,4)		(1,1)			(1,1)		(3)			(1,5)
(1,2)			1						(3,3)			(1,1)
						(3)	(1,3)					
						(2,3)	(2)					
(1,4)			(2,2)						(1,1)			(2,4)
							1					
			(2,3)						(1,2)			
	(1,3)				(1,2)	(2)					(1,1)	
		(1,2)							(1,1)			
(1,2)					(2)	(2)	(2)	(2,4)				1



Answer key 1: For each cell in marked row A, enter the length of the arrow in the cell. Ignore the cells with clues.

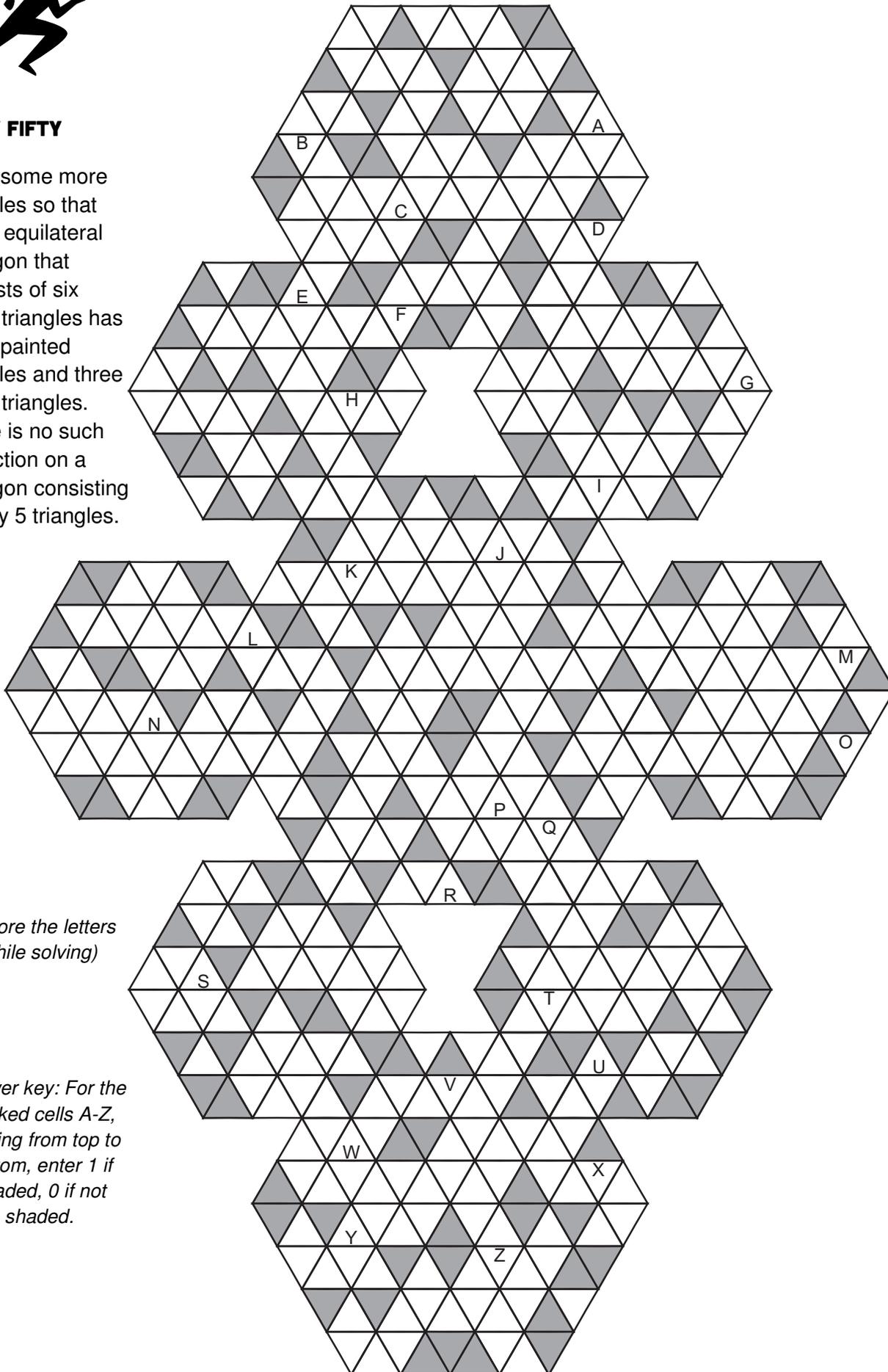
Answer key 2: For each cell in marked row B, enter the length of the arrow in the cell. Ignore the cells with clues.

In the Memory of Riad's father



FIFTY FIFTY

Paint some more triangles so that every equilateral hexagon that consists of six small triangles has three painted triangles and three white triangles. There is no such restriction on a hexagon consisting of only 5 triangles.



(Ignore the letters while solving)

Answer key: For the marked cells A-Z, starting from top to bottom, enter 1 if shaded, 0 if not shaded.

