

NAME

TEAM



**21<sup>ST</sup> World Puzzle Championship**  
**CROATIA, October 1-7 2012**

**BLACK AND WHITE - individual**  
**October 4<sup>th</sup>, 16.45. - 18.15.**

PUZZLE		POINTS
1	White Pentamino	18
2	Battleships	8
3	Paint-By-Numbers With Diagonals	12
4	Hitori	11
5	Fifty-Fifty	5
6	Coral	25
7	Lits	5
8	Paint-By-Sequence	7
9	Nurikabe	6
10	Paint-By-Frame	20
11	Lighthouses	7
12	Blank Crossword	19
13	Tapa	22
14	Thermometers	9
15	Ying-Yang	6
		<b>total 180+BONUS</b>

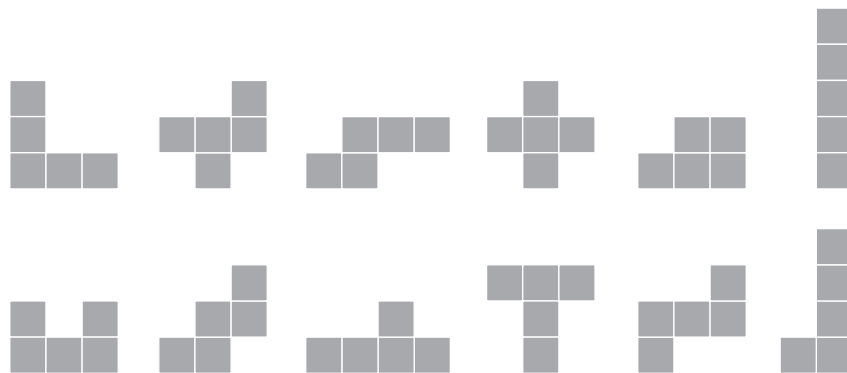
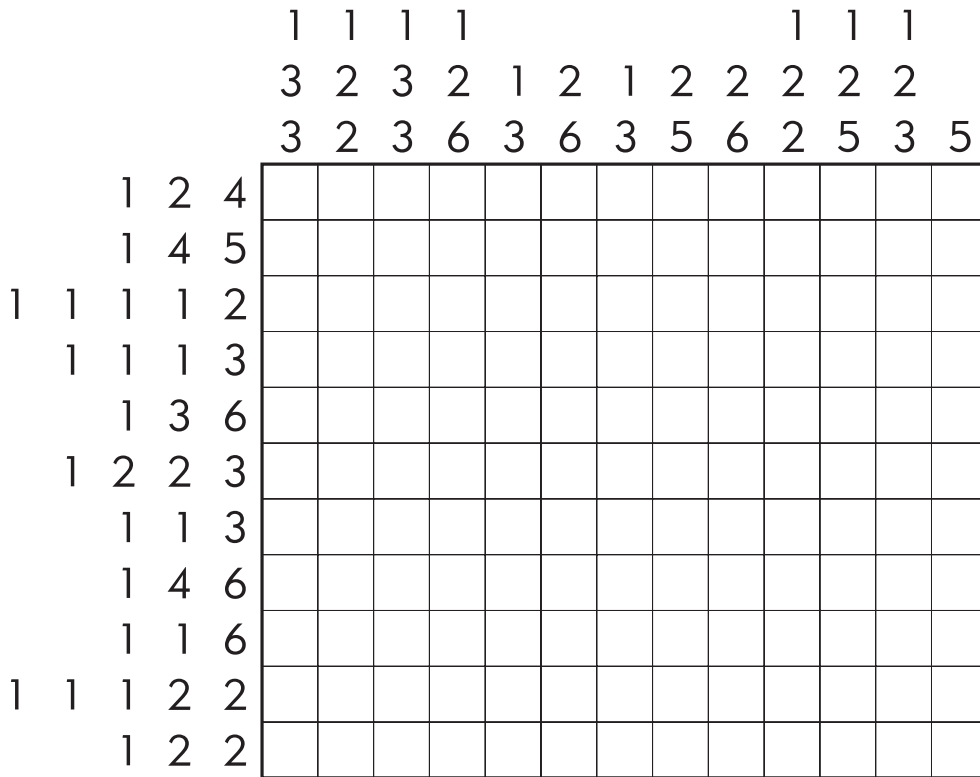
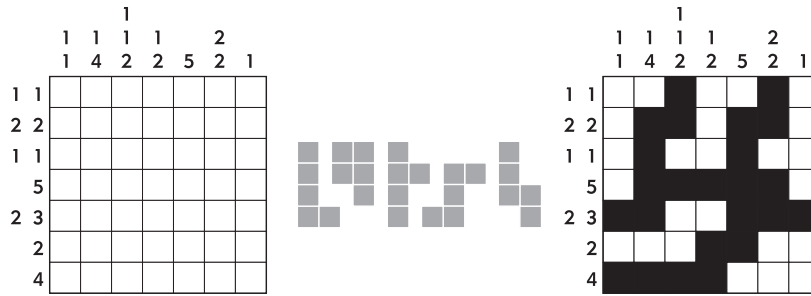
TIME	CONTROL #1	CONTROL #2	CONTROL #3	BONUS	TOTAL POINTS

# WHITE PENTAMINO

## PUZZLE 1

Paint some cells in the grid black. Numbers outside the grid indicate the length of the sequences of connected black squares in the corresponding row/column, but not in the order they appear. All the remaining white cells form twelve different pentaminoes, not touching each other even diagonally. Pentaminoes can be rotated but not mirrored.

Example:



18 POINTS

CONTROL #1

CONTROL #2

CONTROL #3





Black out some cells with numbers so that all the remaining white cells contain different numbers in each row and column, and are all connected horizontally or vertically in a single group. Blackened cells can touch only diagonally.

Example:

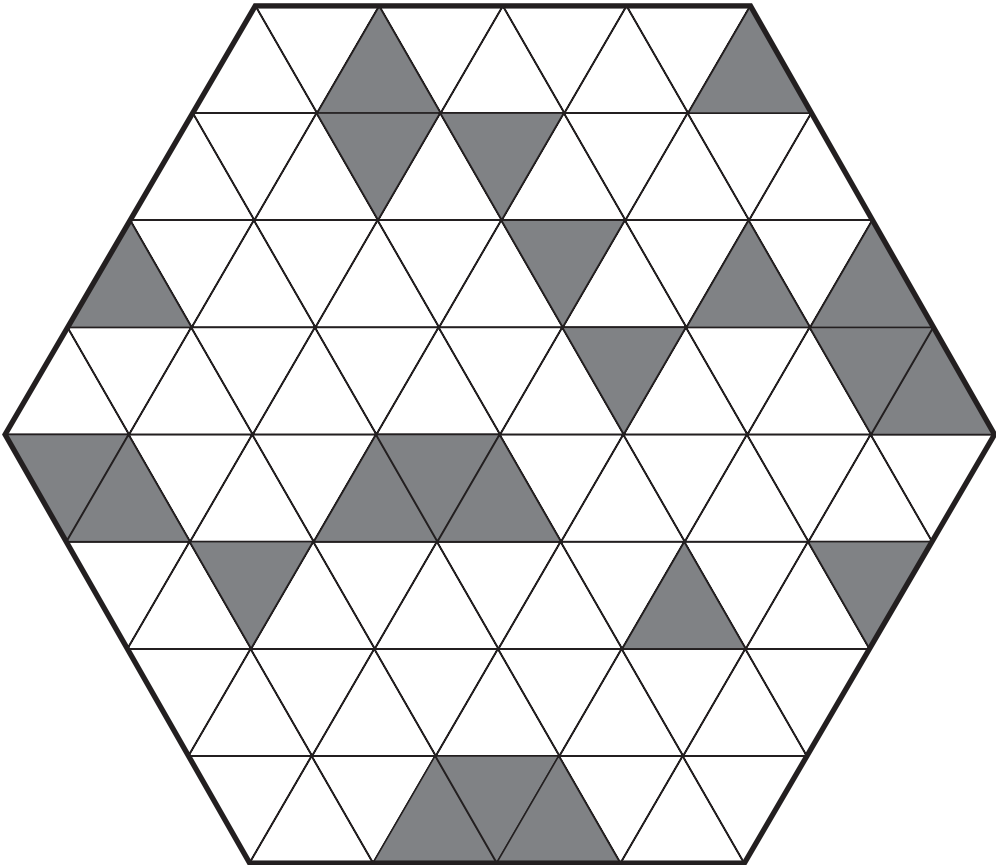
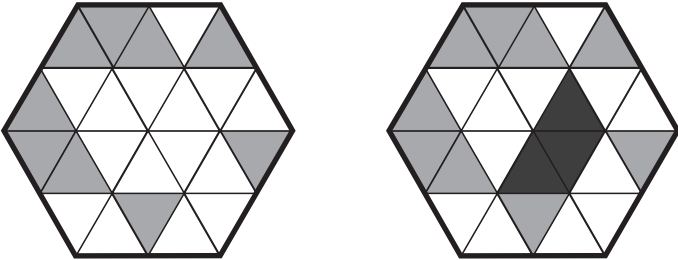
2	1	1	3
3	2	4	2
1	1	3	4
3	1	2	4

2	3	1	3
3	2	4	2
1	1	3	4
3	1	2	4

6	10	5	5	11	3	10	4	10	1	2	8
8	6	1	9	10	5	7	2	11	4	8	3
4	9	7	12	6	2	9	3	8	12	7	4
11	5	12	1	4	9	5	11	6	7	3	2
3	11	6	2	5	1	3	5	10	8	12	4
7	1	10	11	2	7	3	6	9	2	5	11
12	7	11	4	9	10	1	9	12	6	5	11
5	4	6	1	3	12	2	12	7	7	11	10
4	5	12	10	6	8	9	8	2	11	6	1
2	3	9	7	12	5	6	1	3	3	4	7
4	8	3	5	5	11	6	2	1	10	8	6
10	1	2	3	7	6	11	10	4	1	9	5

Paint some more triangles so that every equilateral hexagon that consists of six small triangles has three painted triangles and three white triangles.

Example:



5 POINTS

CONTROL #1

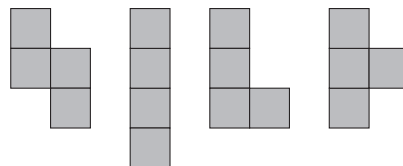
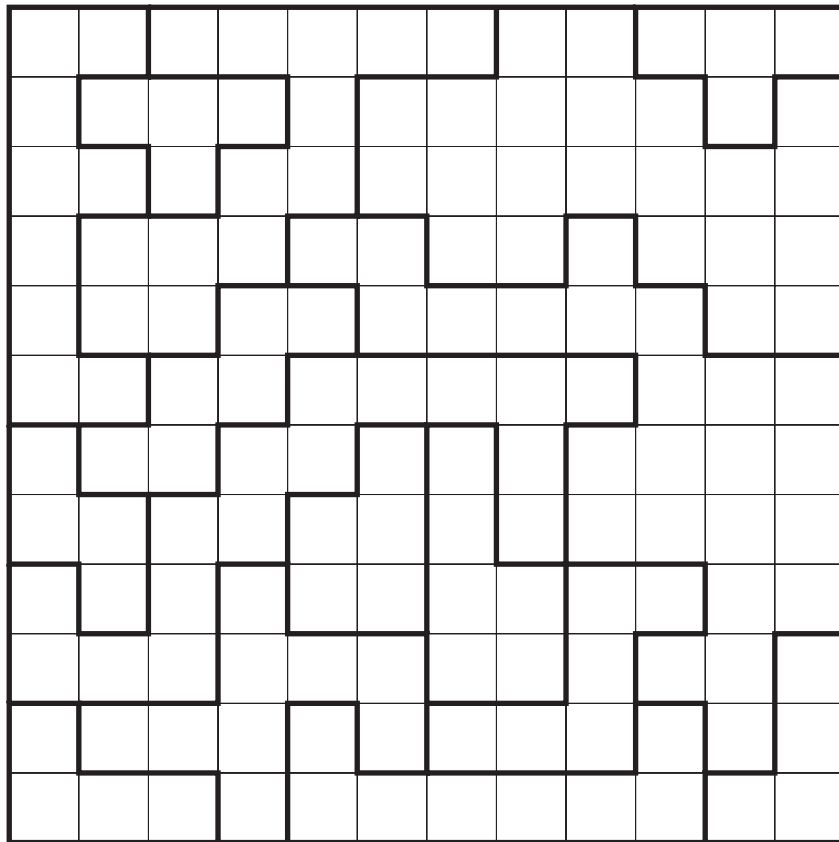
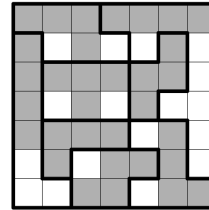
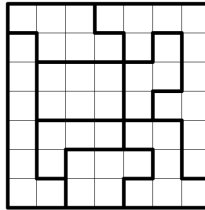
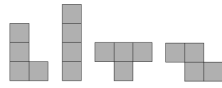
CONTROL #2

CONTROL #3



Black out four cells in each outlined area so that each area includes one tetramino shape. Tetraminoes can be rotated and/or mirrored. Blackened cells form a single interconnected area which doesn't include any 2x2 black square. Same tetraminoes can touch each other only diagonally.

Example:



5 POINTS

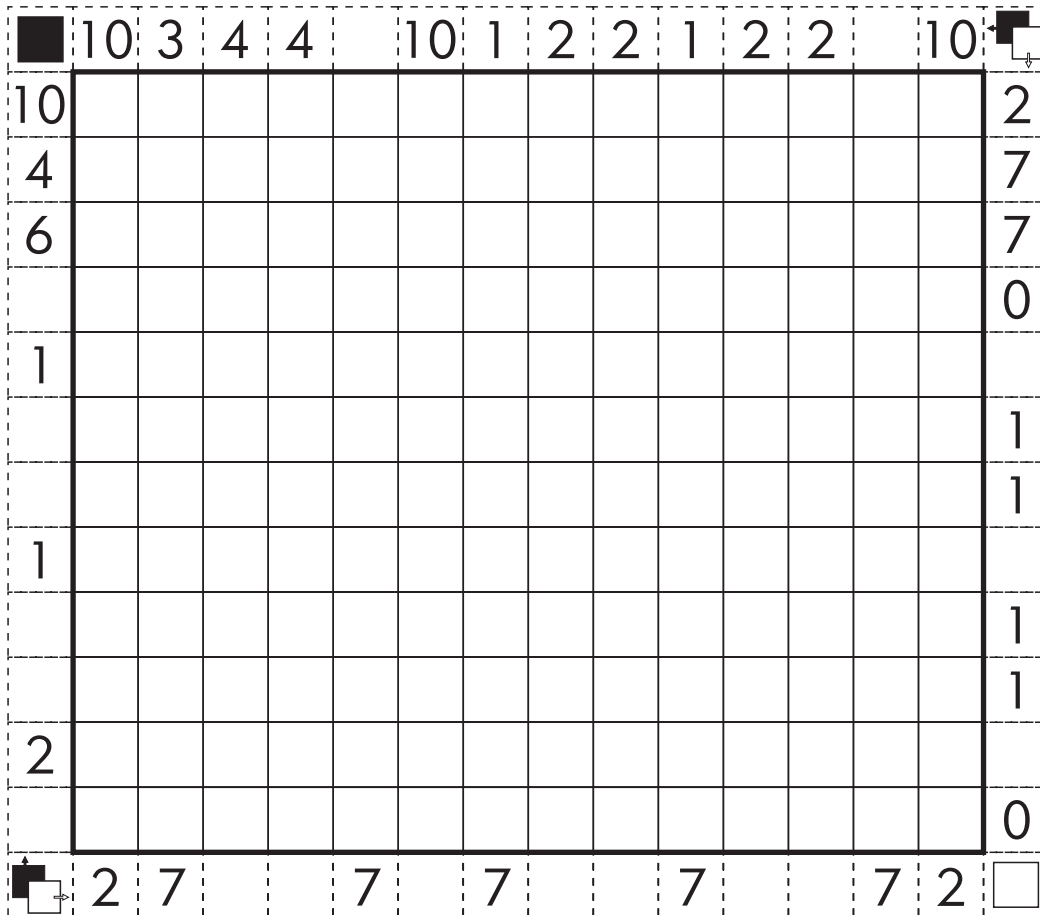
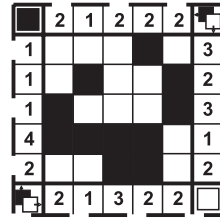
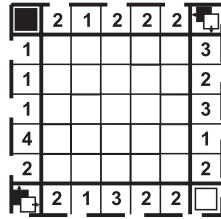
CONTROL #1

CONTROL #2

CONTROL #3

Paint some cells in the grid black. Numbers above and left of the grid indicate the longest sequence of black cells in the corresponding row/column. Numbers below and right of the grid indicate the longest sequence of white cells in the corresponding row/column.

Example:



7 POINTS

CONTROL #1

CONTROL #2

CONTROL #3

# NURIKABE

## PUZZLE 9

Black out some cells in the grid to form a single interconnected area of black cells with no 2x2 black squares. All remaining white cells represent islands. Cells with numbers must remain white and each island must contain exactly one number, which indicates the size of that island (in squares). Islands can touch each other diagonally.

Example:

2					
				3	
2			4		
				1	

2					
				3	
2					
			4		
				1	

				2		2				
								6		
				1						
3		3						5		2
				4						6
					4					
										6
			6							
	9		3				2		3	3

6 POINTS

CONTROL #1

CONTROL #2

CONTROL #3

Paint some cells in the grid black. Numbers above and left of the grid indicate the number of black/white cells framed by cells of opposite colour in the corresponding row/column. Framed cells of the same colour do not need to be consecutive.

**Example:**

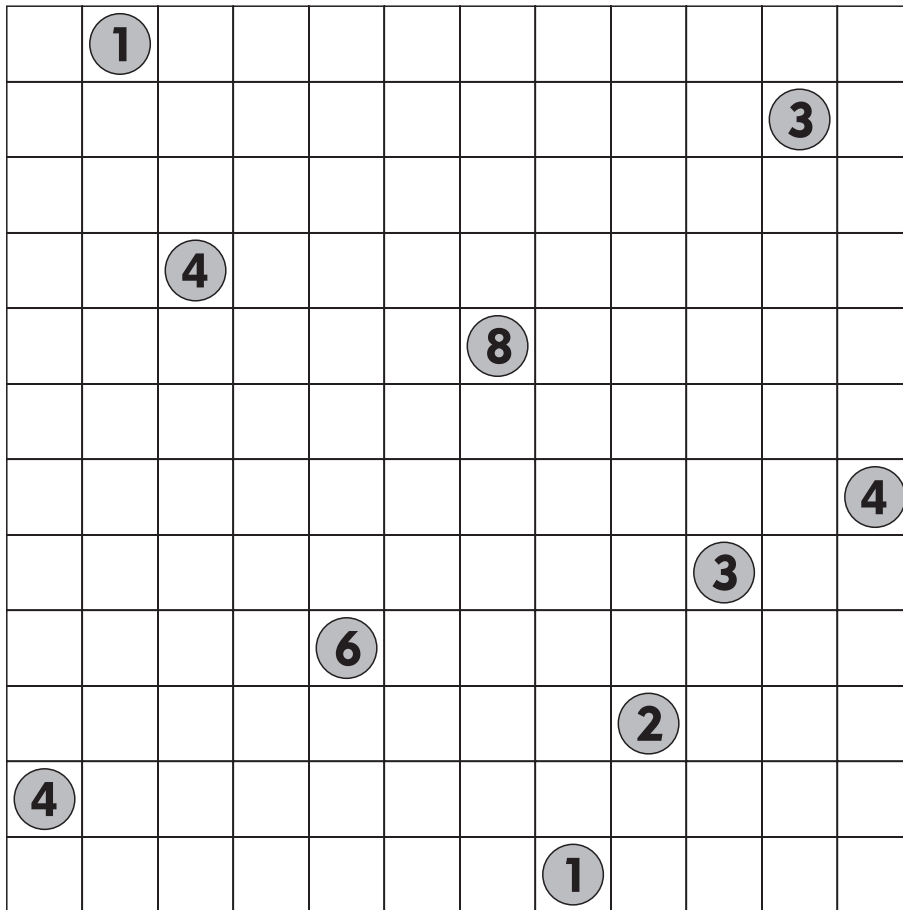
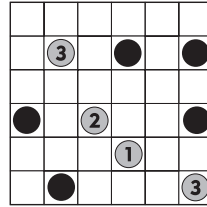
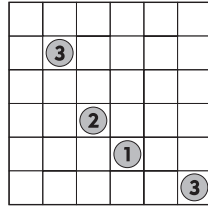
	■	2	0	0	0	3
■	□	1	0	2	3	0
3	0					
0	1					
1	2					
0	3					
2	0					

	■	2	0	0	0	3
■	□	1	0	2	3	0
3	0	■	■	■		
0	1	■	■	■		■
1	2		■			■
0	3	■				■
2	0			■	■	

	■	0	1	1	2	3	2	4	9	4	2	4	1	1	1	1
■	□	5	10	10	4	4	4	4	0	4	4	7	5	10	11	7
2	8															
2	10															
1	1															
2	5															
3	0															
7	0															
9	0															
1	0															
1	0															
1	12															
1	12															
7	6															
2	7															
4	9															
4	9															

Locate some ships (of size of one square) in the grid with lighthouses (circles with numbers). Each number indicates how many ships are located in the corresponding row and column. Ships can neither touch each other nor the lighthouses, not even diagonally.

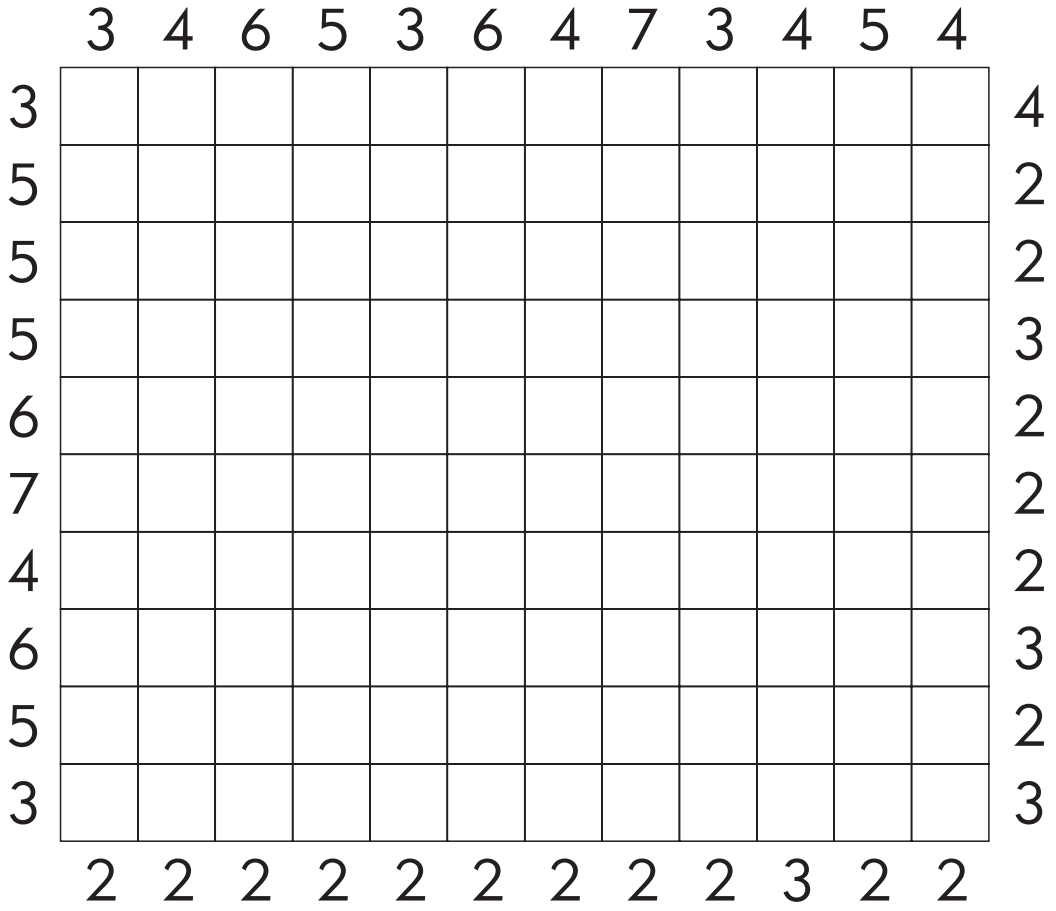
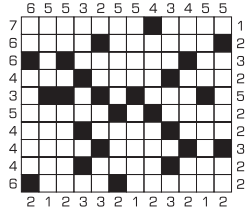
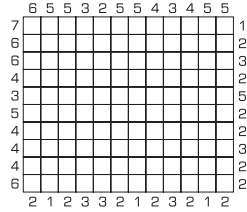
Example:



# BLANK CROSSWORD

Paint some cells black so that you make a crossword grid with all white cells interconnected. Numbers below and right of the grid indicate the number of black cells in the corresponding row/column. Numbers above and left of the grid indicate the longest word (the longest sequence of white cells) in the corresponding row/column.

Example:



19 POINTS

CONTROL #1

CONTROL #2

CONTROL #3

Paint some squares black to create a continuous wall. Number(s) in a square indicate(s) the length of black cell blocks on its neighbouring cells. If there is more than one number in a square there must be at least one white cell between the black cell blocks. Blackened cells cannot form a 2x2 square anywhere in the grid. There are no wall segments on cells containing numbers. Question marks must be replaced with **even** numbers.

Example:

?			1 <sub>3</sub>
	??		?

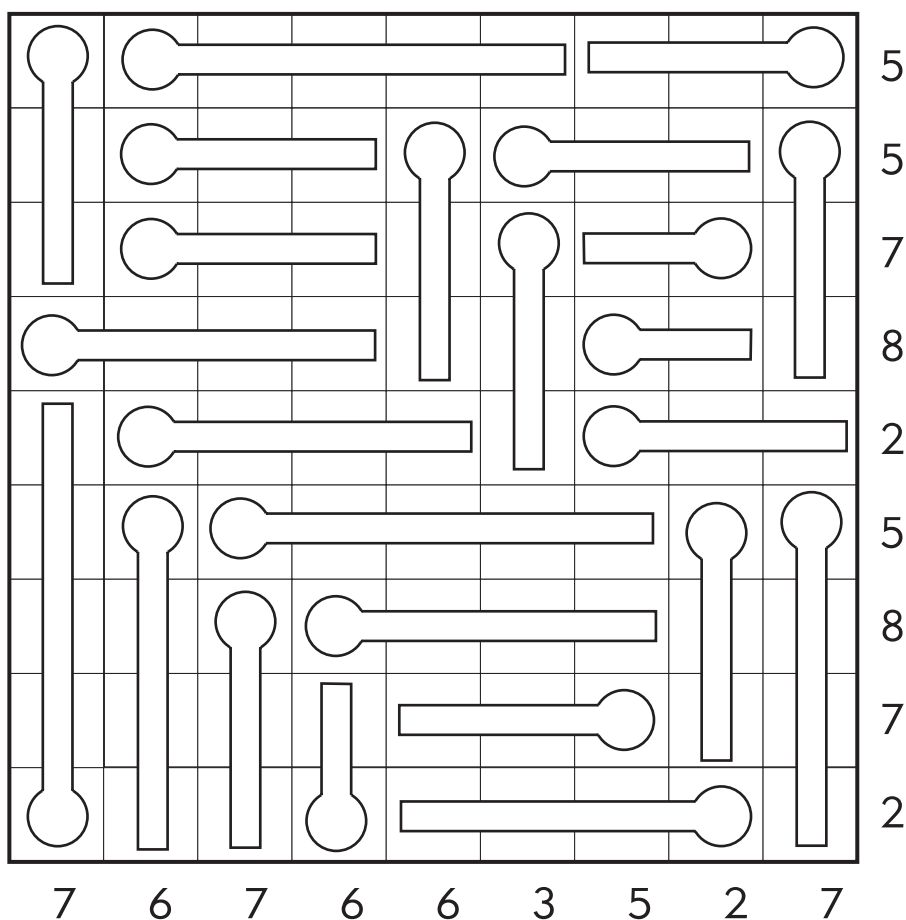
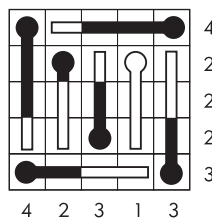
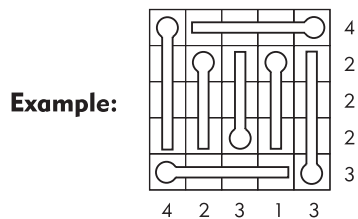
2			1 <sub>3</sub>
	2 <sub>2</sub>		2

		??		5									3
									3 <sub>3</sub>				
	?					?	1	1	1				
					?	1						?	1
									??		?	3	
3	1			?	1		3	3		?	?		
										?	?		
		?	1							1	1		?
										1	1		?
			5			3	3						
?	1							7		?	1		?
						5	1						
			?	3					?	3			1
					?	1					1	1	
					?	1				?	3		?
1			1										

# THERMOMETERS

## PUZZLE 14

The grid consists of a number of thermometers which have to be filled with mercury (painted black). A thermometer can be completely full, empty, or partially filled, up to the gridlines, but always starting from the thicker part. Numbers outside the grid indicate the number of parts of thermometers filled with mercury in the corresponding row/column.



**9** POINTS

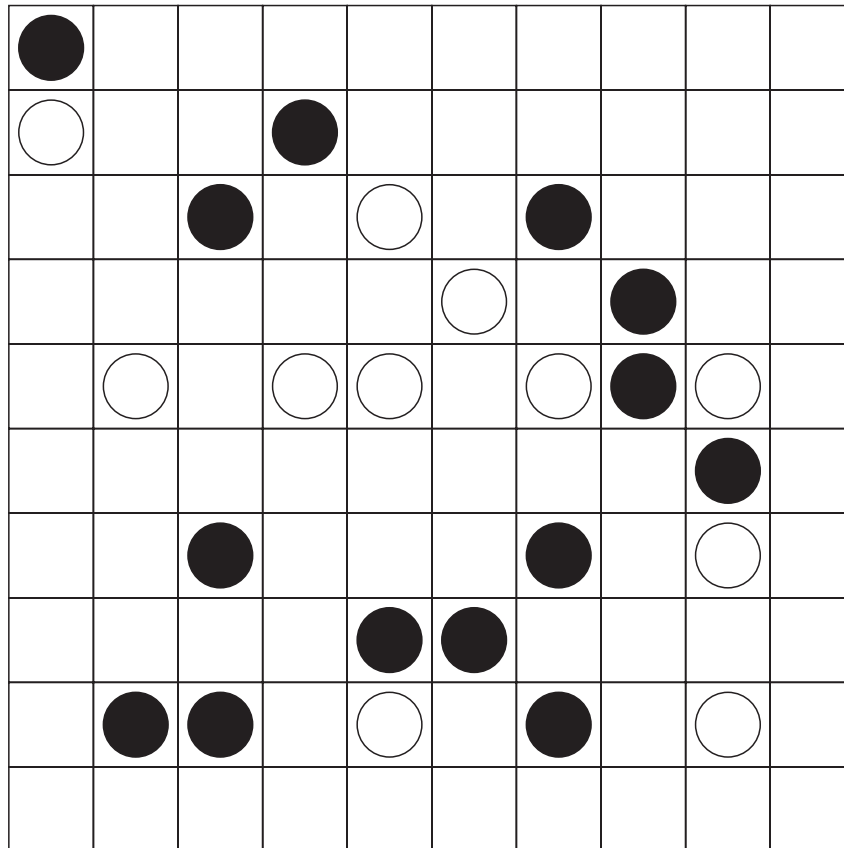
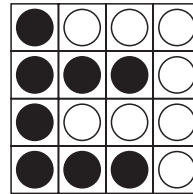
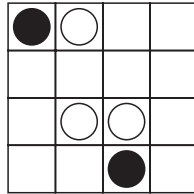
CONTROL #1

CONTROL #2

CONTROL #3

Fill each empty cell with either a black circle or a white circle. All white circles should form a single interconnected area and similarly all black circles should form a single interconnected area. There cannot exist any 2x2 cell region consisting of same colour circles anywhere in the grid. There is the same number of black and white circles in the grid.

**Example:**



**6** POINTS

CONTROL #1

CONTROL #2

CONTROL #3