13ᵀᴴ 24 HOURS PUZZLE CHAMPIONSHIP

9-11, NOVEMBER, 2012
HOTEL AMADEUS
BUDAPEST

PUZZLES BY:

RAUNO PÄRNITS & TIIT VUNK

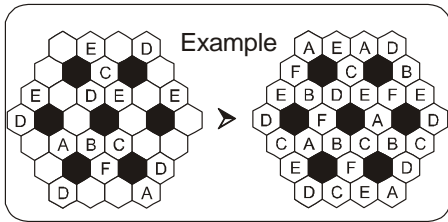| HONEYCOMB	25 POINTS (5 +20)
CHESS & SHIPS	50 POINTS (20 + 30)
MAMMOTH CAVES	50 POINTS (15+35)
1-2-3 SNAIL	40 POINTS (20+20)
IRREGULAR VOWEL SUDOKU	40 POINTS
STAR BATTLE	40 POINTS
LINES OF ACTION	40 POINTS (10 + 30)
BLANK CROSSWORD	120 POINTS (40 + 80)
EASY AS BATTLESHIP	40 POINTS
HITORI	20 POINTS
EASY AS ABC	25 POINTS
ARROW MAZE	45 POINTS (15 +30)
POLYGRAPH TEST	30 POINTS (10+20)
NUMBER PLACE	100 POINTS (20+30+50)
CAMPIXU	50 POINTS (10+40)
CARS	60 POINTS
RUSSIAN FIELDS	85 POINTS (20 + 25 + 40)
TAPA-SUDOKU	140 POINTS (30+110)

TOTAL   1000 POINTS

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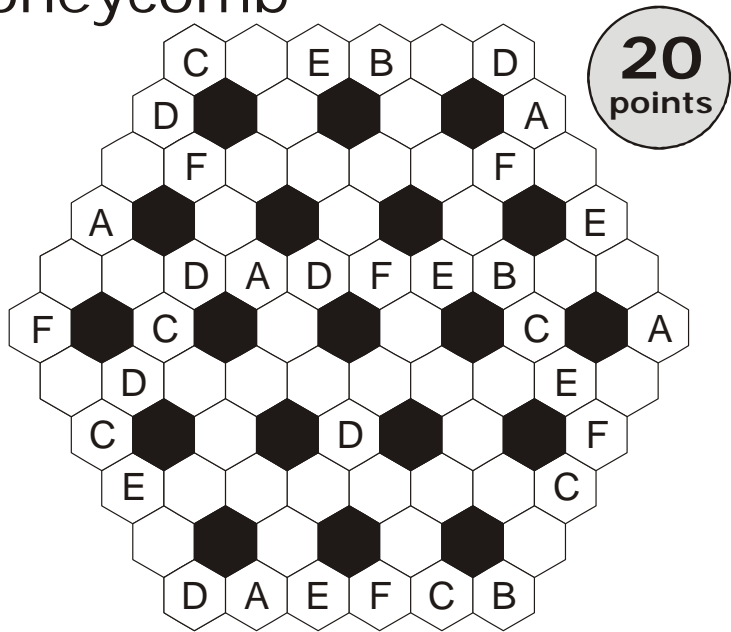BUDAPEST
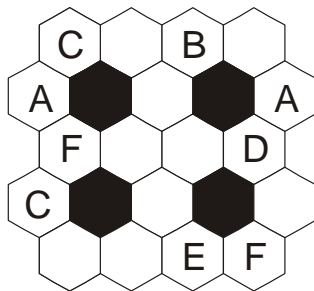
PUZZLES BY
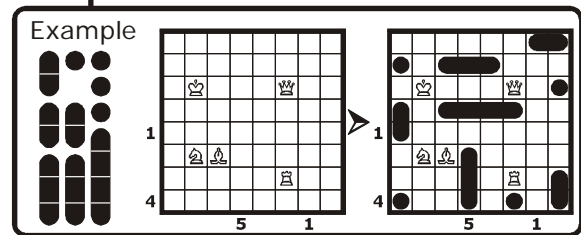**RAUNO PÄRNITS**

Honeycomb

Example

20 points

Write letters A, B, C, D, E and F around every black hexagon. Same letters are not touching each other.

5 points
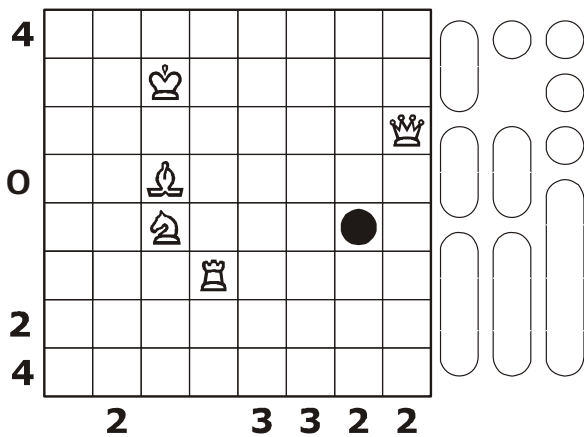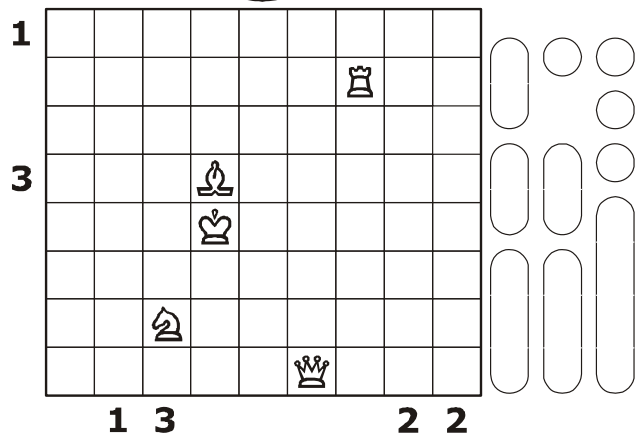
Chess & ships

Locate the position of the fleet given next to the grid. The ships are oriented horizontally or vertically. They do not touch each other not even diagonally. Numbers outside the grid indicate how many cells contain parts of ships in the corresponding row or column. Each chess figure attacks exactly four different size of battleships.

Example

20 points

30 points

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Mammoth caves

Example

The grid represents a cave. All numbers written in the grid must be inside the cave. A number in a grid cell indicates how many cells (including the cell with the number itself) can be seen from that cell to the nearest wall in four directions, horizontally and vertically. All the caves must be orthogonally interconnected. There can be isolated pillars in cave and cave cells can have diagonal touch.

35 points

15 points

1-2-3 snail

Example

Write numbers 1, 2 and 3 (1, 2, 3 and 4 in the larger grid) into some cells of the grid, so that there are all the numbers exactly once in each row and column. Numbers have to be written in sequence 1-2-3-1-2-3-1-... (1-2-3-4-1-2-3-4-1-... in the larger grid) starting from the entrance (indicated by the arrow) and going along the snail-like path to the center of the grid.

20 points

20 points

1-3

1-4

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Irregular vowel sudoku

40 points

Example

Place letters into grid so that each letter appears only once in every row, column and thickly outlined areas. In grey cell you can place only vowels (A, E, I, O).

E	S	T	O	N	I	A

Star battle

Place two stars in each row, column and thickly outlined area (one star per cell) so that stars do not touch, not even diagonally. Example with one star.

Example

40 points

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Lines of action

10 points

Connect two cells with the same letters by a line. The sections of a line run horizontally or vertically between the center points of orthogonally adjacent cells. A line must not cross or touch itself or another line. If there is a more than 2 similar letters, choose the right pair. Ignore single letters. There can be unused cells.

Example

30 points

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Blank crossword

Create a crossword grid by painting some cells black. Numbers below and right indicate the number of black cells in the corresponding row/column. Numbers above and left indicate the lenght of longest word (longest consecutive sequence of white cells) in corresponding row/column. Black cells can touch each other and there can be isolated areas.

Example

	4	3	2	3	1	5	2	
3								1
4								2
3								2
2								2
3								3
	1	1	2	2	2	0	2	

➤

	4	3	2	3	1	5	2	
3				■				1
4					■		■	2
3			■		■			2
2		■		■				2
3	■		■					3
	1	1	2	2	2	0	2	

40 points

	3	4	6	2	5	3	3	4	3	2	3	
2												6
4												3
5												1
6												4
2												5
7												1
4												4
	2	1	1	3	2	3	3	3	1	3	2	

80 points

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

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Easy as battleship

40 points

Locate the position of the fleet given next to the grid by painting some cells black. The ships are oriented horizontally or vertically. They don't touch each other, not even diagonally. Numbers outside the grid indicate the size of the first seen battleship in the corresponding row or column.

Top: 3 2 1 3 2

2										1
										0
2										3
				X						2
										2
										1
										4
										3
1										3

Bottom: 0 2 1 1 0 3 0 2

Example

0
1
2 >
X

0 1 2

0
1
2
X

0 1 2

Hitori

20 points

Blacken some cells in grid. In a row or column no number must remain on a white cell more than once. Black cells must not be orthogonally adjacent (diagonally is allowed). All white cells must form a single orthogonally continuous area.

Example

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

>

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

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

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Easy as ABC

Enter letters A, B, C into some cells. Each letter must occur exactly once in each row and each column; some cells remain empty. The letters around the diagram indicate the first letter which can be seen in the corresponding row or column.
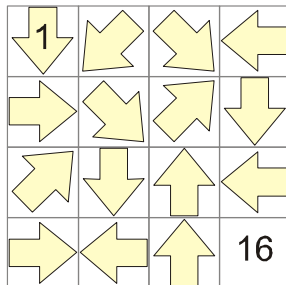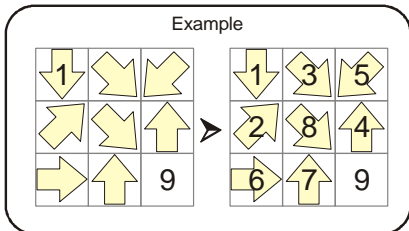
25 points

Example
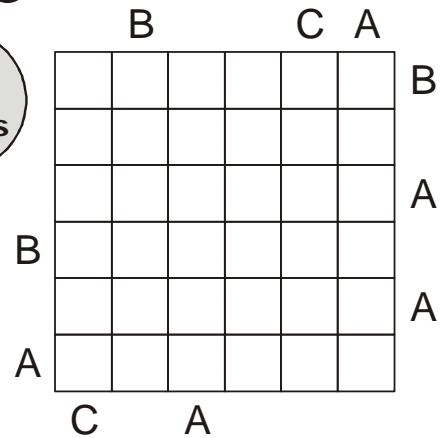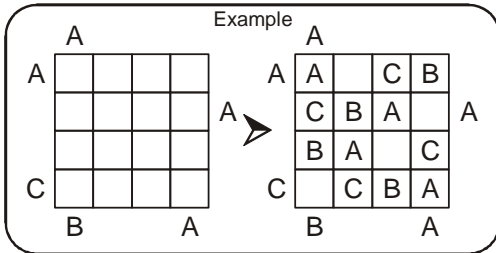
Arrow maze

Find a path through the maze by visiting every cell of the grid exactly once. Start with the cell with number 1, then write numbers in order in each cell you visit and finish in a cell with no arrow. You can jump from one cell to another (not necessarily into neighbouring cell) horizontally, vertically or diagonally (45 degrees), but only in the direction of the arrow. Some numbers are already given.
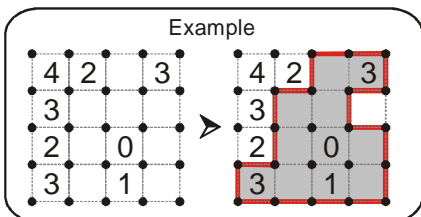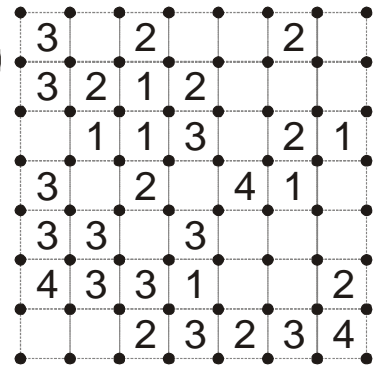
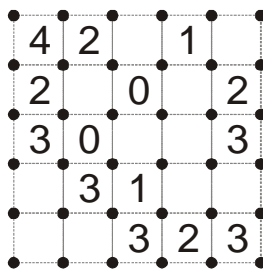**15 points**

30 points

Example
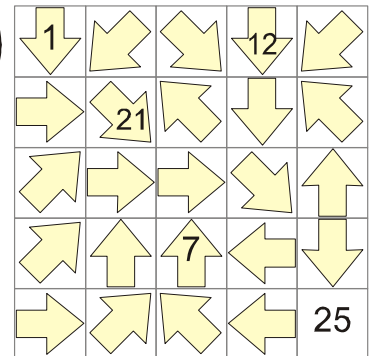
Polygraph test

Draw a single closed loop along the grid lines which does not cross or touch itself. If the number will be inside the loop, it indicates how many of the grid lines surrounding this cell must be used by the loop. If number will outside the loop, it indicates how many of them are NOT used by the loop.

10 points

20 points

Example

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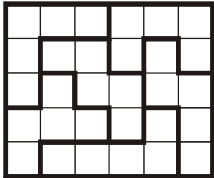HOTEL AMADEUS,
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Number place

Place given set of numbers into the grid rows, so that each pentomino piece contains only the same digits.
3-digits numbers don't overlap.

Example

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

116, 216, 266, 333, 363, 411, 444, 622, 642, 666

20 points
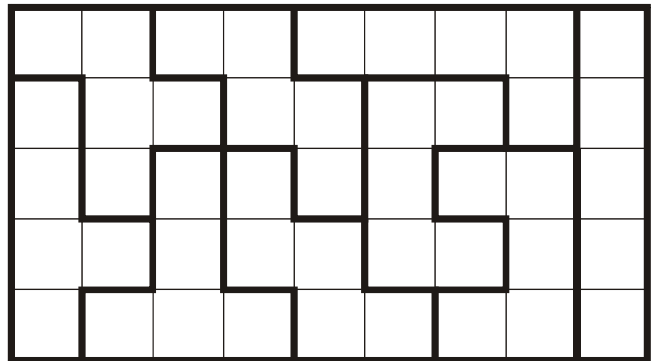
117, 137, 147, 331, 337,
337, 371, 411, 417, 447,
447, 477, 733, 744, 771

50 points
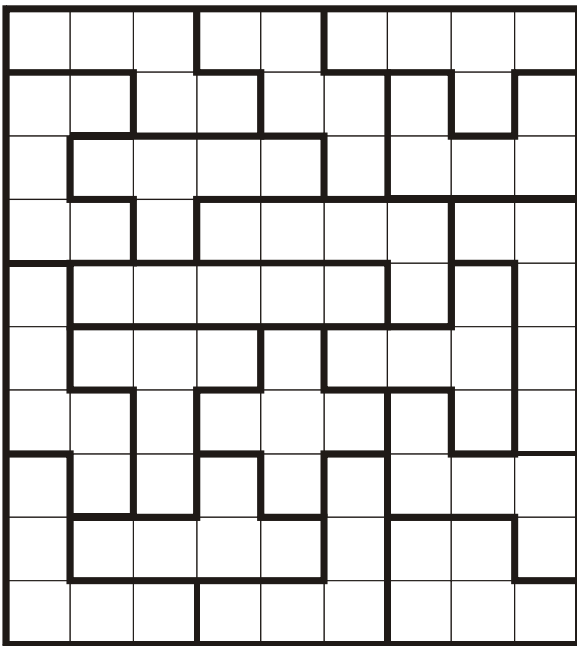
111, 116, 117, 138, 166, 188,
222, 226, 276, 334, 338, 344,
355, 438, 444, 473, 525, 555,
555, 666, 669, 777, 777, 799,
822, 834, 888, 992, 994, 999

30 points

111, 116, 133, 143, 221,
321, 422, 444, 446, 462,
466, 621, 622, 643, 662

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Campixu

Paint some cells black in the grid. In one region, marked by a thick line, the cells must be all painted or all unpainted.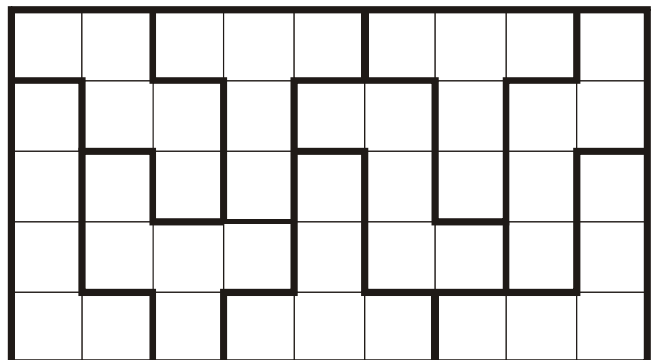 In each row and column the first number indicates the number of painted cells in the corresponding row or column. In each row and column the second number indicates the amount of groups of painted cells. There must be at least one unpainted cell between two groups of painted cells.

10 points

		4	6	2	10	5	5	6	2	6	4
		1	2	2	1	4	5	3	2	2	1
4	1										
6	2										
5	3										
6	4										
5	3										
4	3										
6	4										
4	4										
6	2										
4	1										

Example

		1	3	5	3	1
		1	2	1	2	1
1	1					
3	1					
1	1					
5	1					
3	1					

>

		1	3	5	3	1
		1	2	1	2	1
1	1					
3	1					
1	1					
5	1					
3	1					

40 points

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

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Cars

Example

U	L	U	U	
T	C	B	O	
S	S	B	S	
A	R	A	N	

AN, BA,
LU, OB,
RC, SS,
SU, TU, VT

➤

U	L	U	U	LU
T	C	B	O	OB
S	S	B	S	SS
A	R	A	N	AN
TU	RC	BA	SU	VT

Write car names next to every row and below every column of the grid so that all letters of each car can be found in the corresponding row/column. Each letter in the grid belongs to only one car. Some cars in the list are not used.

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

60 points
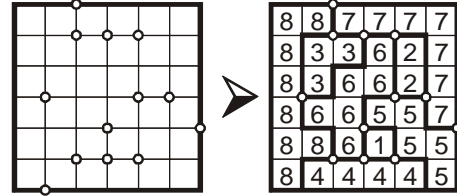
BUICK
DACIA
DAF
DATSUN
DODGE
FERRARI
FIAT
FORD
HONDA
HUMMER
HYUNDAI
ISUZU
IVECO
JEEP
LANCIA
LEXUS
NSU
POBEDA
PORSCHE
SAAB
SEAT
SUZUKI
ŠKODA
ZIL
VOLGA
VOLVO

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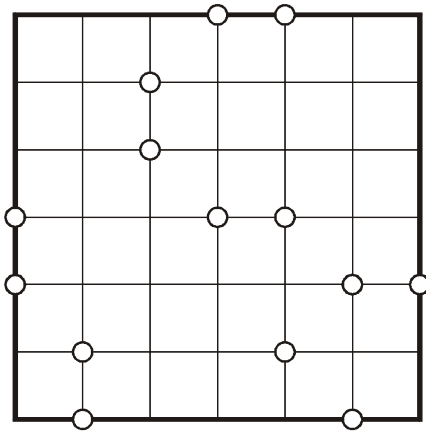
Russian fields

Divide the grid (along the grid lines) in 8 fields, all of them different by size 1-8. All intersections where three segments of field borders meet are marked with circles in the grid. There are no intersections of four segments of field borders. **No fields contains 2x2 or bigger area.** All walls should be connected from both ends.
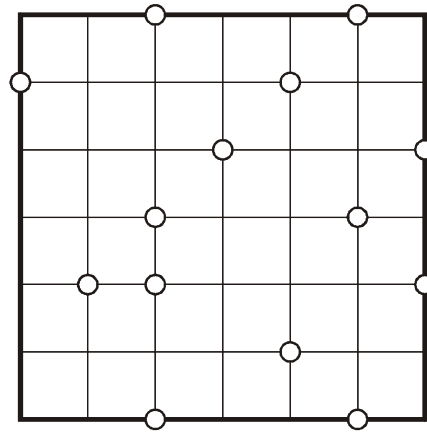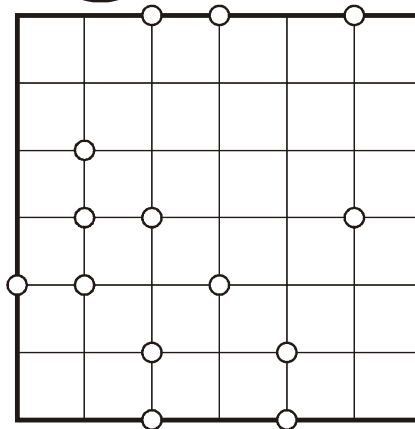
Example

20 points

25 points

40 points

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Tapa-sudoku

Place digits 1-4 (1-9) in the grid, so that each digit appears exactly once in each outlined box. Rest of cells must be blackened. All black cells must be connected and form an ordinary tapa-puzzle solution (no 2x2 or larger black cells area), In rows and columns digits must not repeat and they must form a <u>consecutive</u> (not in order) line (there could be whole four (nine in bigger grid) digits, could be none). You can't paint circled cells and cells with digits. Digits in circles are correct clues for tapa-puzzle. All possible circles are shown.

Example

30 points

110 points