

NAME:

POINTS:



# 5<sup>TH</sup> 24 HOURS PUZZLE CHAMPIONSHIP

22-23 MAY, 2004

HOTEL AMADEUS

BUDAPEST

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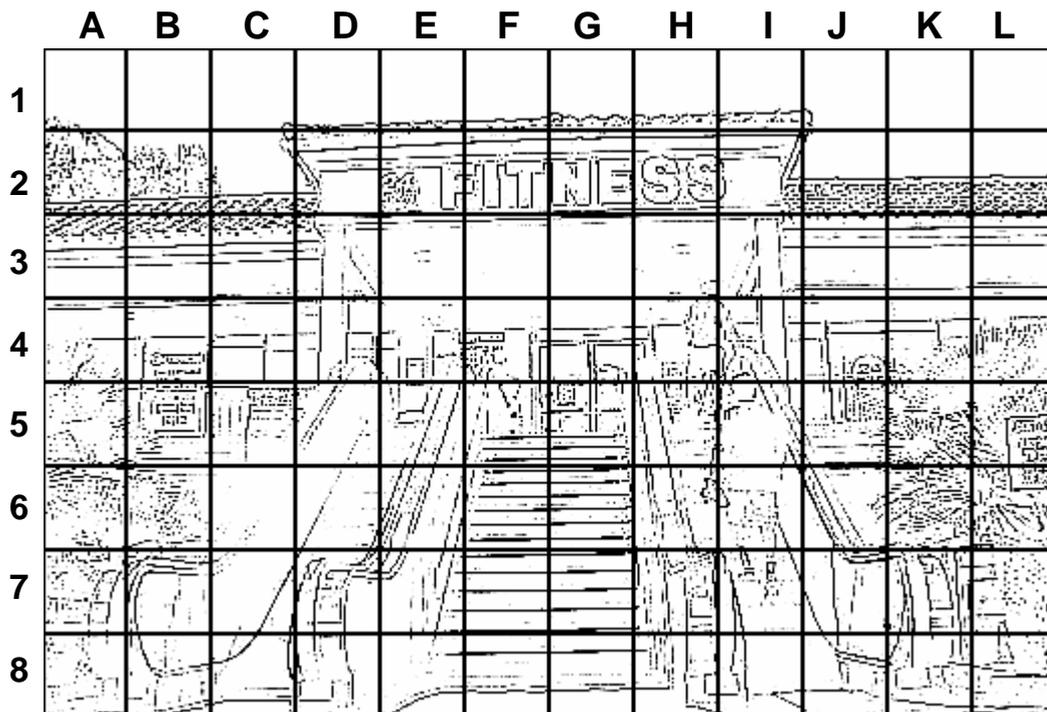
PUZZLES BY  
**LÁSZLÓ OSVALT**

Hidden pieces	25 points
Magic squares	90 points (35 + 55 points)
Sherlock	45 points
Queen's Park	70 points (25 + 15 + 30 points)
Easy as ABC diagonally	120 points (20 + 45 + 55 points)
ABC-pathfinder	100 points (35 + 65 points)
Sea serpent(ine)	100 points (35 + 65 points)
ABC connection	45 points (20 + 25 points)
Battleship with words	45 points
Scrabble	70 points
Flexible net	60 points
Find the loop	85 points (30 + 55 points)
Pentomino-nodes	40 points
Hexagonal rope-trick	50 points
Domino form	55 points



**Hidden pieces**

Find the cut-out elements in the picture and write down their coordinates! The elements may be rotated, but not mirrored.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Points: 25 (5 / found part)**



**Magic squares**

Write numbers between 1 and 7 (between 1 and 8 in the second diagram) into the empty fields so that each number occurs in all rows, columns and the amorphous sections bordered by the bold lines exactly once.

*Sample:*

			3		2
				1	
4				5	
	6				1
	3				
2		1			



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

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

35 points

	2					
4						
						6
				6	5	
3		5				1
	4				1	

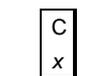
55 points



### Sherlock

The puzzle's name refers to a similar PC-game. Fill the grid with the listed marks (e.g. "A, B, C" in sample) so that each mark appears exactly once in the appropriate row. To place the marks correctly, the given rules must be satisfied. There are 3 kinds of rules:

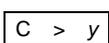
1. **Same column**
2. **Near column**
3. **Left - right**



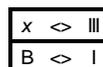
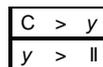
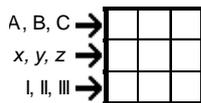
The marks must be in the same column.



The marks must be in neighboring columns (order may be reversed).



The first mark must be on more left column than the second.



A, B, C, D -> 


$\alpha, \beta, \gamma, \delta$  -> 


1, 2, 3, 4 -> 


$\oplus, \otimes, \oplus, \otimes$  -> 

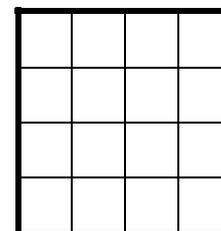
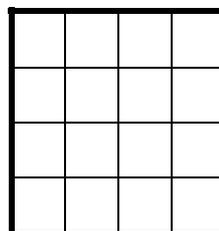
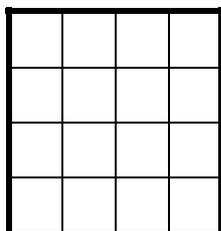
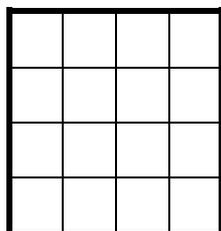

B <> 3
D <> $\oplus$
1 <> $\alpha$

3	A	D	$\beta$
$\otimes$	$\gamma$	$\oplus$	4

D > 2
$\gamma$ > $\oplus$
4 > C
1 > $\otimes$

45 points

Use these empty tables for trying...





### Queen's Park

Some queens (chess pieces) are hiding in the figure; their exact number is given for each puzzle. A queen attacks all fields that are the same row, column or diagonal with her, except when there is another queen among her and the examined field. The numbers in the fields indicate the attacking queens' number. Mark the queens on the figure.

*Sample:*

1		4	
0	2		
1			

4 queens



1		4	
0	2		
1			

4 queens

2				1
			4	3
2		3		
1				1
	2			

6 queens

25 points

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

5 queens

15 points

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

9 queens

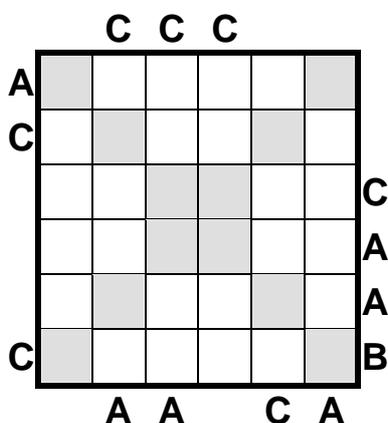
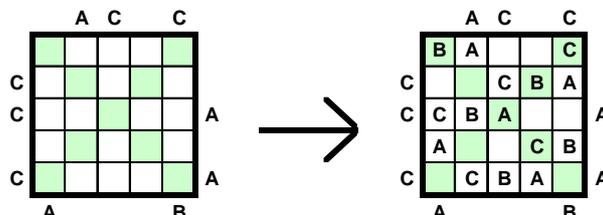
30 points



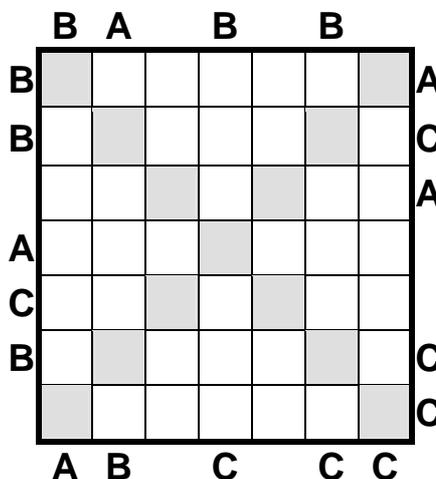
**Easy as ABC diagonally**

Fill the letters A, B, C in the diagrams. Each letter occurs once in each of the rows, columns **and the two longest diagonals**. The letters outside the diagram indicate the letters you come across first from that direction.

*Sample:*

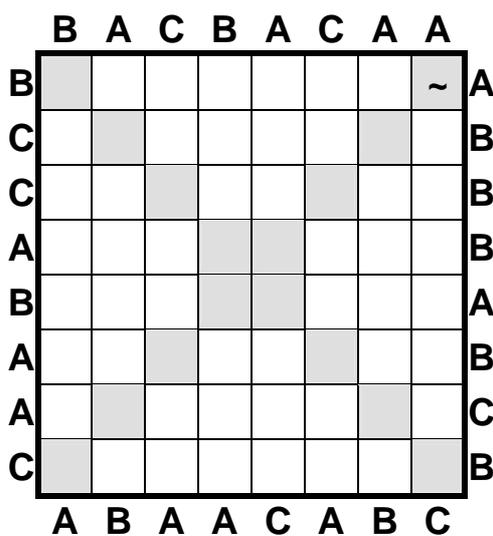


20 points



45 points

55 points



(The "~" mark on the right upper corner indicates an **empty field!**)



**ABC-pathfinder**

Draw a continuous line into the diagram (starting / ending at the fields marked with "o"), which cannot overlap or intersect itself. It can pass horizontally, vertically or diagonally and must touch all fields exactly once. On fields marked "A", the line must turn by right angle; on fields marked "B", the line must turn from straight (horizontal / vertical) direction to diagonal or vice versa; on fields marked "C", the line must pass through without changing direction.

*Sample:*

		A		
o			B	C
	B	C	A	B
		B		C
o		C		B



		A		
o			B	C
	B	C	A	B
		B		C
o		C		B

o	C	B		C		B
A	A		C	C		A
				A		
C	B		A		B	B
	A	B	A			o

**35 points**

A	C			A	A		
A		A	A			B	
A		C	C			A	B
o	C	A		A		C	o
	A		A	A		A	A
A		C				B	

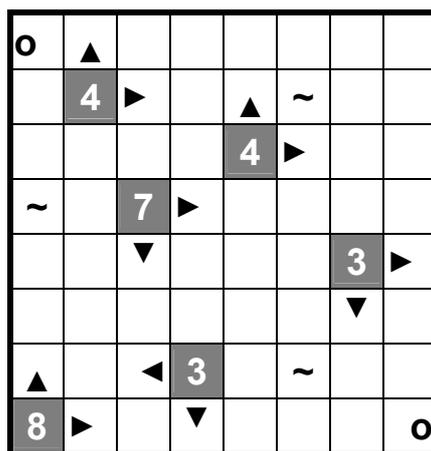
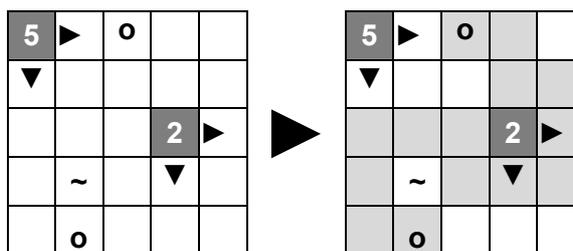
**65 points**



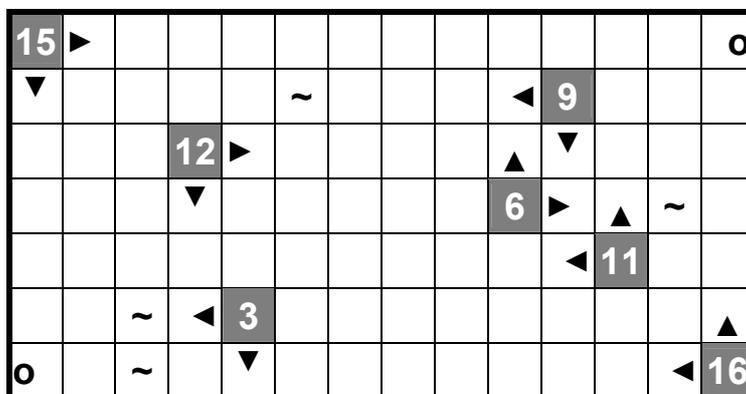
### Sea serpent(ine)

Each diagram symbolizes a sea, and a serpent hiding in it. Only its head and tail can be seen, at the fields marked by "o". The serpent's body can pass through the fields only horizontally or vertically, and the monster **can touch its own body, though only diagonally**. The serpent never passes through the fields containing "~" marks (rocks) or numbers. The latter functions as a half-sided lighthouse: it **shows the number of the fields where the serpent is present, but only towards the directions marked by arrows**. Find the serpent and draw it into the diagram.

Sample:



35 points



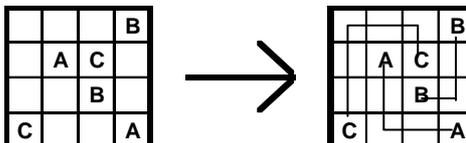
65 points



**ABC-connection**

Connect the same symbols with an unbroken line. The lines don't intersect or overlap. The lines can pass only through the middle lines of the squares.

*Sample:*



	A	E				A
		D		B		C
	E					
	C					B D

20 points

								E
A		D						
				B				
					E	F		
	C		A				C	
					D	B		
F								

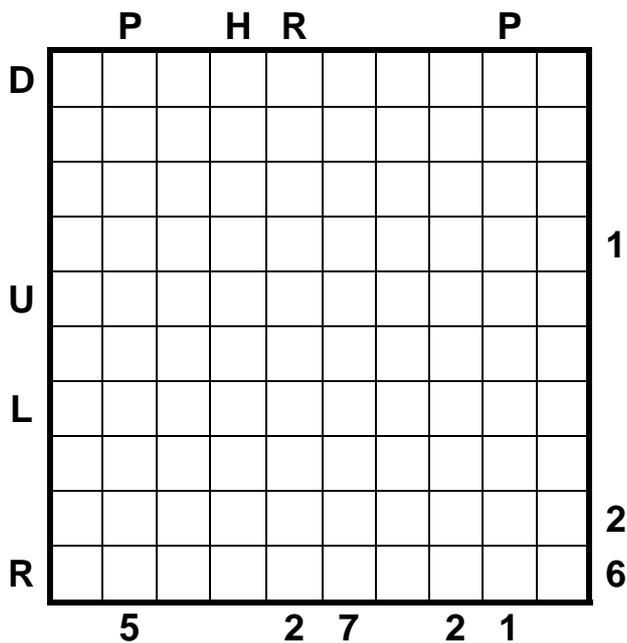
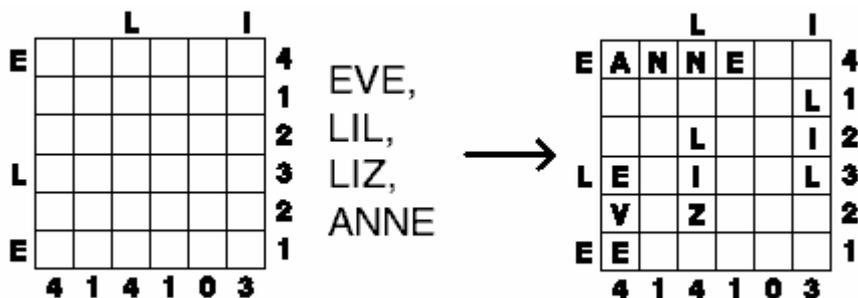
25 points



**Battleship with words**

Place the listed words into the grid in a way that the squares used by the words must not be neighboring – not even diagonally – with squares used by another names. The numbers outside the grid show how many letters must be in the certain row or column. There are some letters outside the grid, too. These letters must be placed at least once in that row or column.

*Sample:*



Words:

- DEEP
- PURPLE
- JETHRO
- TULL
- URIAH
- HEEP

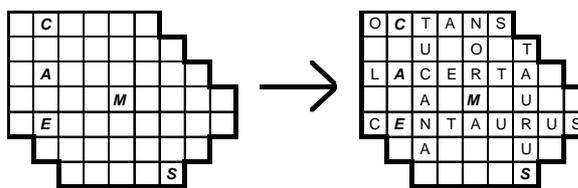
45 points



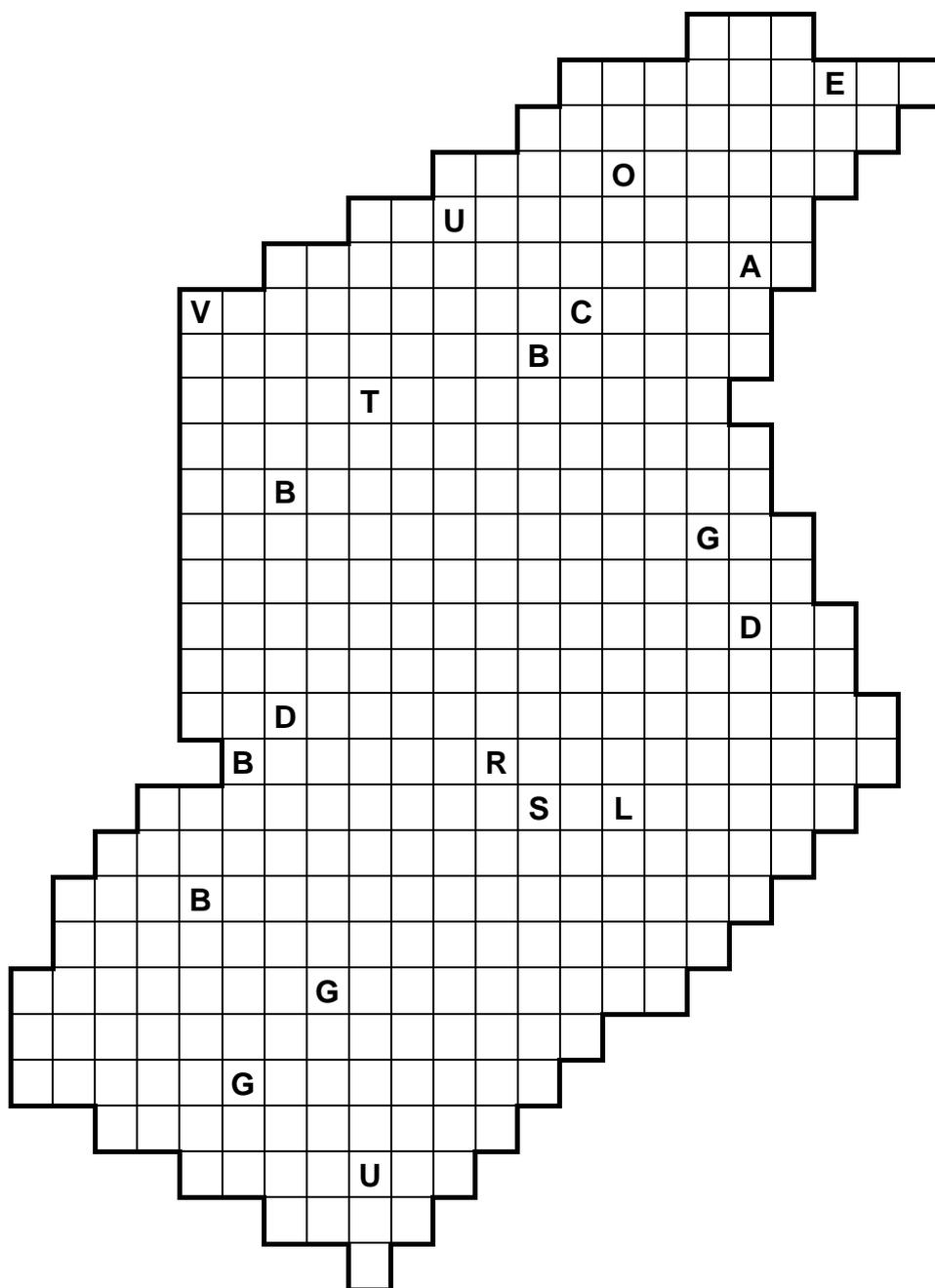
**Scrabble**

Place all the listed words in the grid in a way that each word should have at least **two** common letters with at least **two** another words. The letters in the grid should be used at least by one word. Any (even two-letters) words must not be in the grid, which is not on the list. Exactly one letter from each word is given in advance.

**Sample:**



CENTAURUS, LACERTA, NORMA, OCTANS, TAURUS, TUCANA.



**Words:**

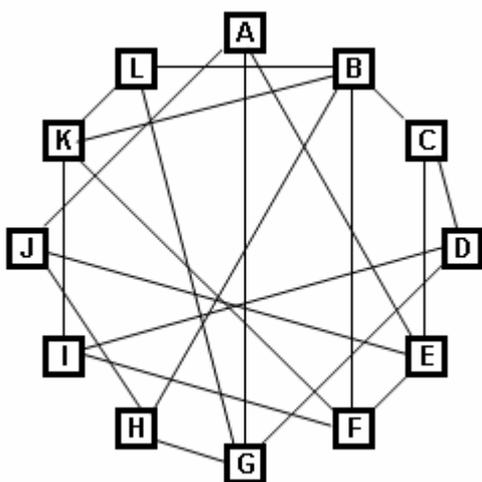
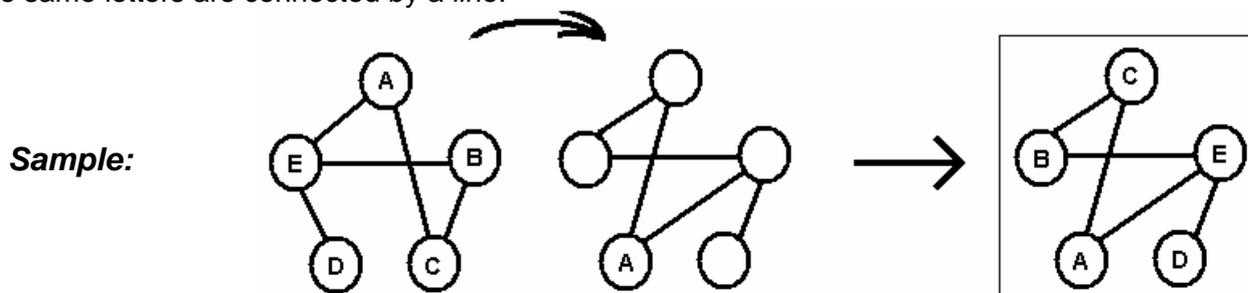
- ALBACETE
- ATHLETIC BILBAO
- ATLETICO MADRID
- BARCELONA
- BETIS
- CELTA VIGO
- DEPORTIVO
- ESPANYOL
- MALAGA
- MALLORCA
- MURCIA
- OSASUNA
- RACING SANTANDER
- REAL MADRID
- REAL SOCIEDAD
- SEVILLA
- VALENCIA
- VALLADOLID
- VILLAREAL
- ZARAGOZA

**70 points**

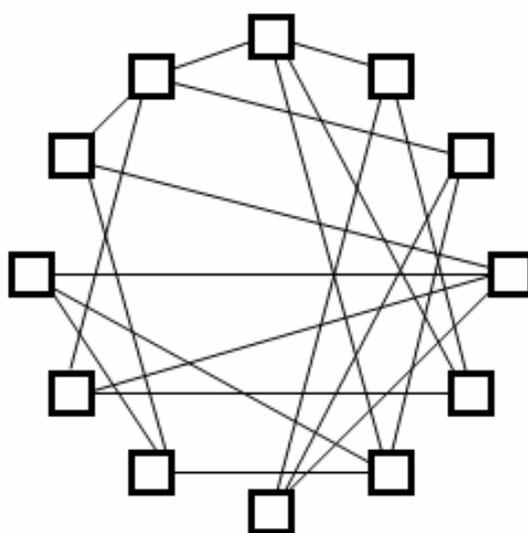


**Flexible net**

Write one letter into the empty circles so that in the two diagrams exactly those circles that are marked by the same letters are connected by a line.



60 points

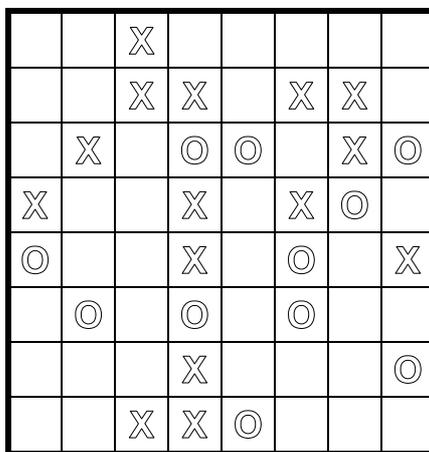
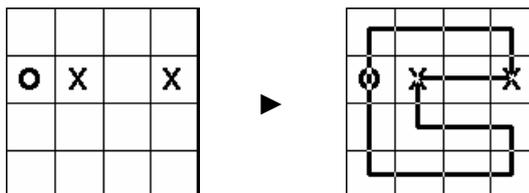




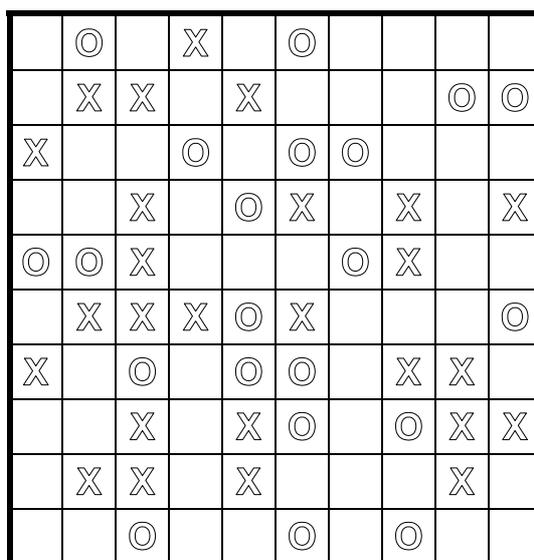
**Find the loop**

Draw into the diagram an endless loop, that doesn't intersect nor overlap, crosses all the fields exactly once, and can only horizontally or vertically pass. On the fields marked by "X" the loop's line breaks in a right angle; on the fields marked by "O" it passes through straight.

*Sample:*



**30 points**



**55 points**

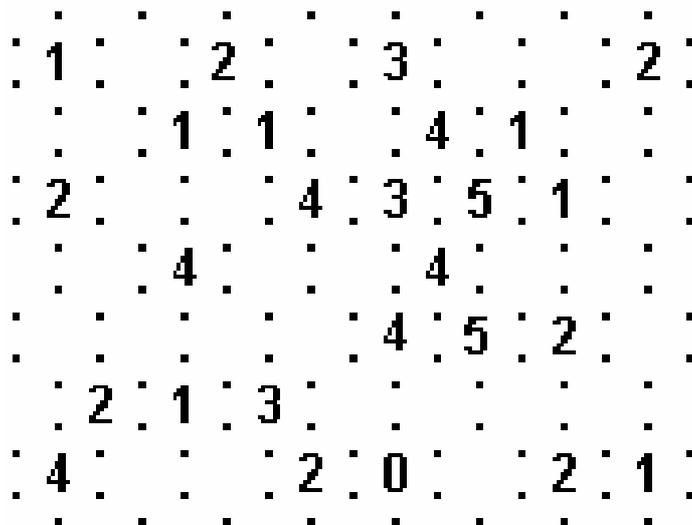
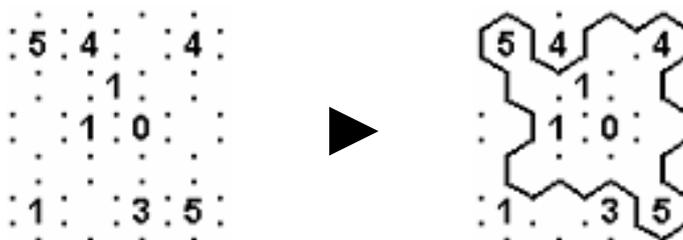




**Hexagonal rope-trick**

Draw a loop-form rope into the diagram, that doesn't intersect nor overlap itself. The rope consists of straight sections, which always pass between neighboring points of a base hexagon. The numbers written in some of the hexagons show how many sections of that hexagon belongs to the rope.

*Sample:*



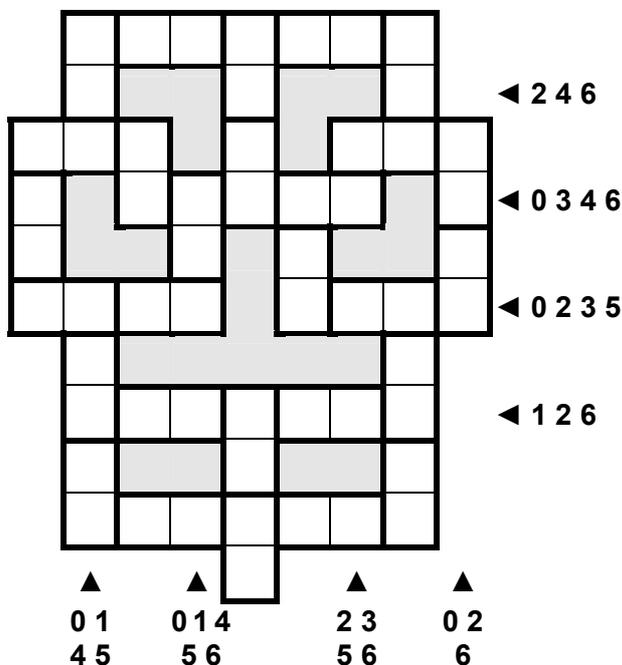
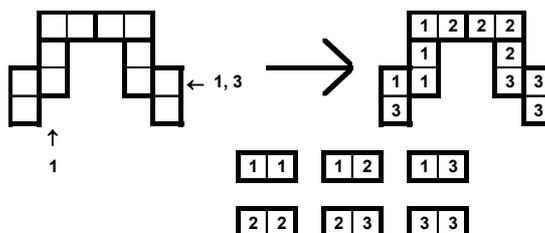
50 points



**Domino form**

Place all the elements of the given domino set into the figure, according to the domino game's rule, i.e. the touching parts of any neighboring domino stones must contain the same numbers. The given numbers beside and below the figure show the numbers occurring in the corresponding row or column.

*Sample:*



55 points

- |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| 0 0 |     |     |     |     |     |     |
| 0 1 | 1 1 |     |     |     |     |     |
| 0 2 | 1 2 | 2 2 |     |     |     |     |
| 0 3 | 1 3 | 2 3 | 3 3 |     |     |     |
| 0 4 | 1 4 | 2 4 | 3 4 | 4 4 |     |     |
| 0 5 | 1 5 | 2 5 | 3 5 | 4 5 | 5 5 |     |
| 0 6 | 1 6 | 2 6 | 3 6 | 4 6 | 5 6 | 6 6 |