10TH 24 HOURS PUZZLE CHAMPIONSHIP

4-6 SEPTEMBER, 2009
HOTEL BENTA
BUDAPEST

INSTRUCTIONS BOOKLETS

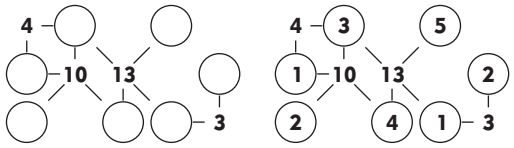
10TH 24 HOURS PUZZLE CHAMPIONSHIP
4-6 SEPTEMBER, 2009
HOTE BENTA ,
BUDAPEST

PUZZLES BY
RUDI MRAZOVIĆ
ZRINKA KOKOT

CIRCLE SUMS — 45 points

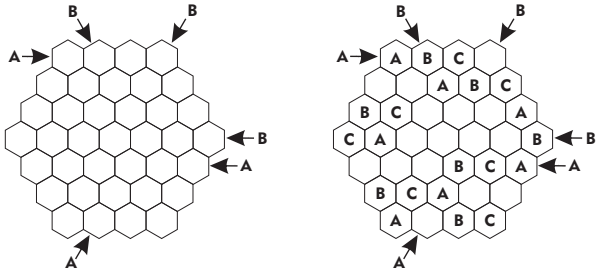
Fill the circles with the digits 1 through 9 so that the numbers given in the grid indicate the sum of all adjacent (horizontally, vertically and diagonally) digits inside the circles. Digits in circles cannot be repeated within any single row, column and sum.

in example: numbers 1-5



EASY AS ABC — 40 points

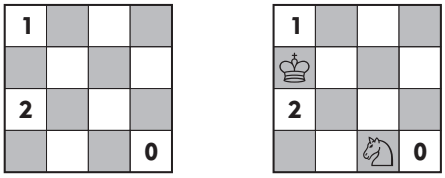
There is an A, a B and a C in each direction of the honeycomb while the rest of the hexagons remain empty. The letters outside the honeycomb indicate which letter is first in the corresponding direction.



CHESS PLACEMENT — 80 points (35+45)

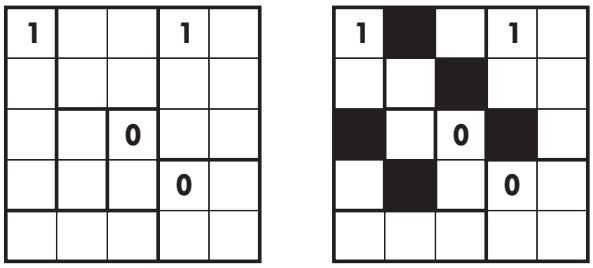
Place five chess pieces on the board, namely one king, one queen, one rook, one bishop and one knight each. The numbers indicate how many pieces can move to this square from their position. No piece may attack another, and no piece may be placed on a numbered square.

in example: only knight and king



HEYAWAKE — 115 points (35+80)

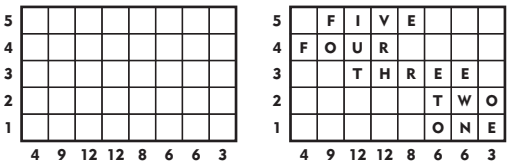
Black some of the cells in the grid following these rules: no two black cells can touch each other horizontally or vertically, all white cells must be connected, no horizontal or vertical sequence of white cells may pass through more than two rooms (rectangles with thick border). The number in the cells indicate the amount of black cells in that room. Cells with numbers may be black or white. Rooms without number can contain any number of black cells (including 0).



NUMBERS AND LETTERS — 65 points (25+40)

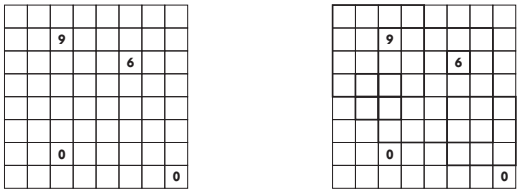
Spell numbers (in given language) on the left into consecutive squares of corresponding row. Numbers below the grid indicate sum of numbers which have a letter in corresponding column.

in example: numbers 1-5 in English



SQUARES — 60 points (30+30)

In each grid, draw five different squares, along the gridlines, with the sides from 1 to 5. Squares can cross each other, but cannot share the corners or the sides, not even partially. Numbers inside the grid show the sums of sides of squares covering the cell with number.



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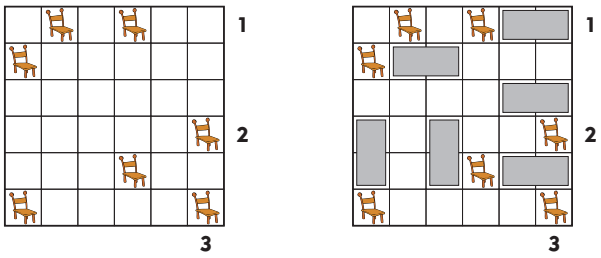
RESTAURANT

75 points (35+40)

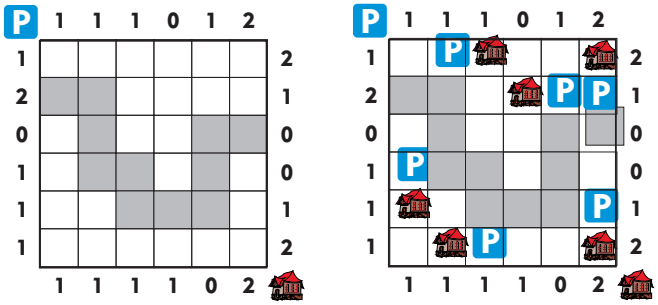
Grid represents a restaurant. Chairs are already placed and your task is to place 1x2 tables so that every chair has at least one table in an adjacent cell. Numbers right and below the grid indicate the amount of tables in corresponding row or column. Tables cannot touch each other, not even diagonally.



ROAD IN VILLAGE

80 points (30+50)

Grid represents a village and gray cells represent a road going through it. Each house has its parking space in an adjacent cell which is adjacent to a gray cell. Cell with house can touch gray cell only diagonally. Numbers right and below the grid indicate the amount of houses in corresponding row or column. Numbers left and above the grid indicate the amount of parking spaces in corresponding row or column. Locate the position of houses and parking spaces in the village.



PENTOMINO POOL

80 points

Place the given pentominoes into the grid, and connect some of the numbers outside the grid to fishes. Each fish must be connected with a path to exactly one number outside the grid, which represents the amount of cells this path goes through (cell with the fish is included). Path connects centers of adjacent squares. Other numbers outside the grid indicate the amount of pentomino parts in corresponding row or column. Pentominoes can be rotated and mirrored, but cannot touch each other, not even diagonally. Path cannot intersect itself or another one.

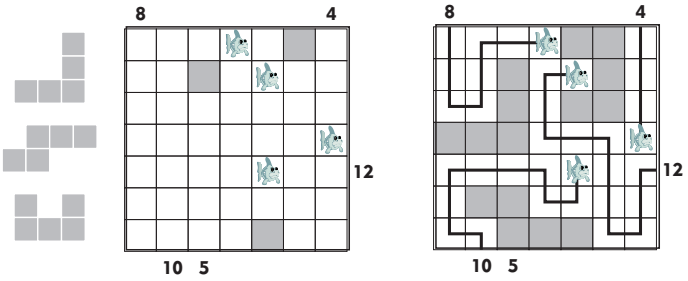
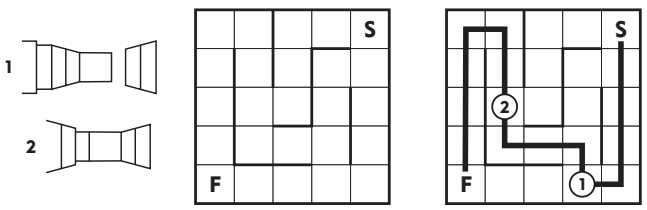


PHOTO MAZE

70 points

Tourist entered the maze at the cell with S (start) and went through it without visiting the same place twice. He took some pictures on his way to the cell with F (finish), facing toward the way we are going. He took them in numerical order. Find the route he took from S to F.

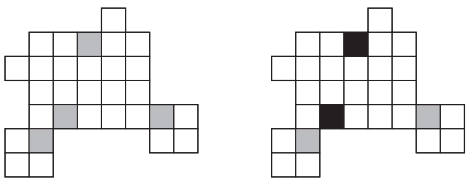


DOMINO TILING

50 points

Black 5 grey cells so that it is possible (not necessarily in a unique way!) to tile the rest of the grid (white and remaining grey squares) with domino plates.

in example: 2 black cells



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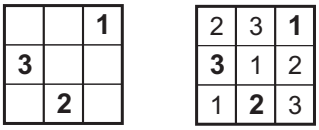
CODED PARTY

12x20 points

There are twelve puzzles which are interconected. There are exactly four leters in each puzzle. Each letter is a part of exactly two puzzles and it represents the same number in both puzzles. Partial points are given only if the solution of one puzzle is a part of a complete solution.

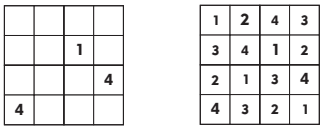
CAPSULES

Each capsule consists of numbers 1, 2 and 3. Each numer is repeated exactly twice in every row and column. Same numbers can not touch each other horizontally or vertically.



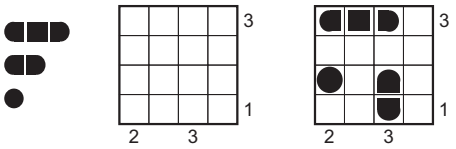
SUDOKU

Fill in the grid so that every row, column and outlined 2x3 region contains the digits 1 through 6.



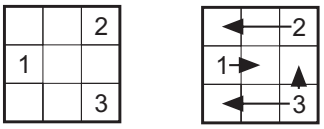
BATTLESHIPS

Determine the position of the entire fleet in the grid. The ships do not touch each other, not even diagonally. The numbers outside the grid tell you the numbers of parts of the ships in the corresponding direction.



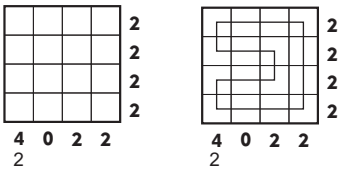
FOUR WINDS

Draw lines (horizontally and vertically) starting from the squares containing the numbers. The number represents the cumulative length of the lines that start in the cell with it. All cells are filled and the lines do not cross each other.



LOOP

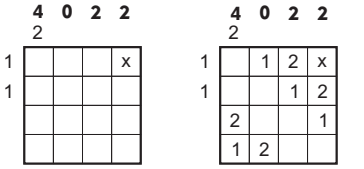
Draw a single closed loop which does not cross itself and goes through all cells in the grid. The numbers outside the grid represent the number of turnes the loop makes in corresponding direction.



EASY AS 1234

Place the numbers 1, 2, 3, 4 and two empty cells in the grid. The numbers outside the grid represent the number which is first seen in the corresponding direction.

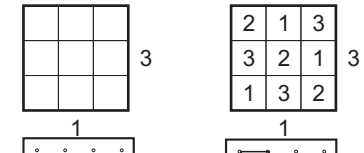
in example: numbers 1 and 2



SKYSCRAPERS

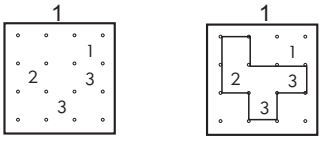
Every row and column has 6 skyscrapers of different heights (from 1 to 6 floors). The numbers outside the grid represent the number of visible skyscrapers in the corresponding direction.

in example: heights 1-3



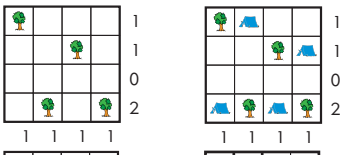
FENCES

Draw a single closed loop. The numbers represent the number of parts of the loop (lines) that surround it (vertically and horizontally).



TENTS

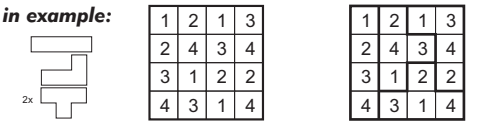
Find the placement of the tents in the grid, having in mind that every tent has its own tree. Every tent is placed directly beside the tree (vertically or horizontally), and does not touch any other tent not even diagonally.



PENTOMINO DIVISION

Divide the grid into 7 different pentominoes (rotated and mirrored pentominoes are considered to be the same). Every pentomino consists of numbers 1, 2, 3, 4 and 5.

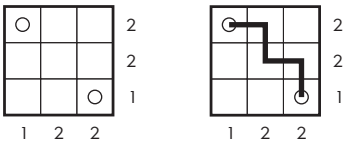
in example:



SNAKE

Draw a snake (21 cells long), which does not touch or cross itself. Snakes head and tail are given, and the numbers outside the grid represent the number of parts of the snake in the corresponding direction.

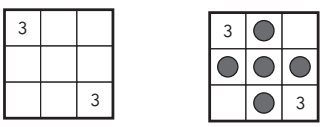
in example: 5 m snake



MINESWEAPER

Find the position of the 12 mines in the grid. The numbers inside the grid represent the number of mines in the neighbouring cells (horizontal, vertical and diagonal).

in example: 5 mines



10TH 24 HOURS PUZZLE CHAMPIONSHIP

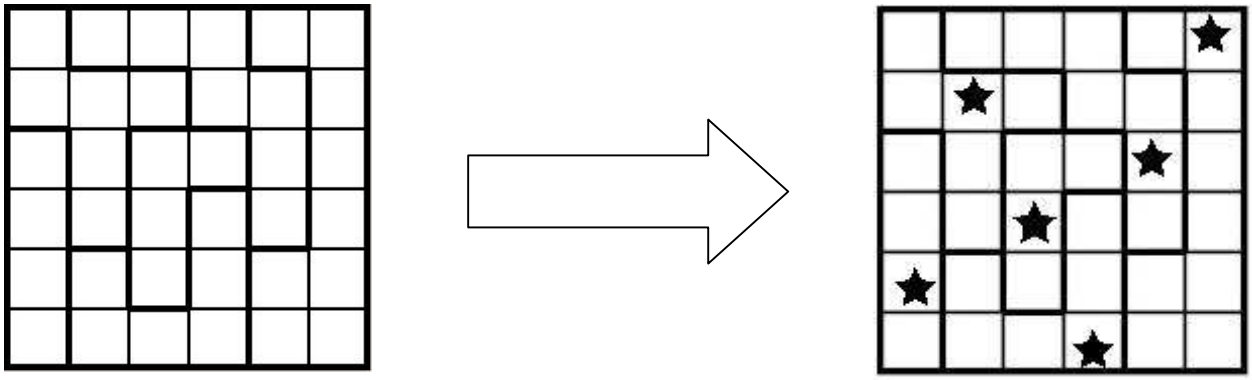
4-6 SEP, 2009
BUDAPEST

PUZZLES BY
ALBERTO FABRIS

INSTRUCTIONS BOOKLET

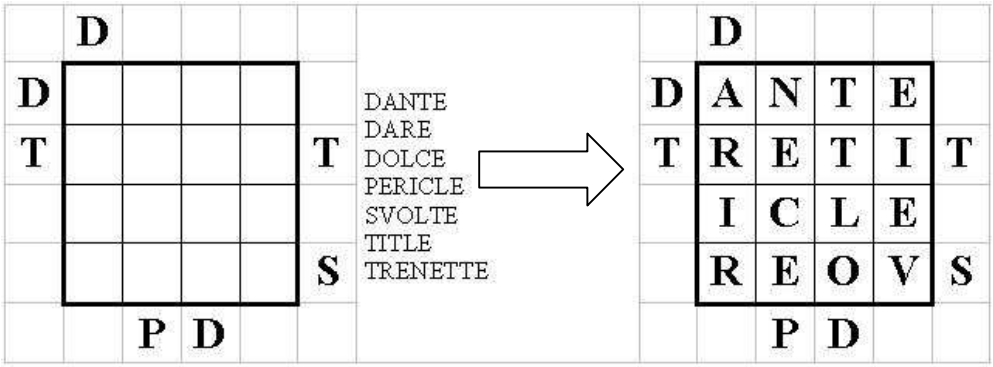
Star Battle	***130 (60+70)***
Kakuro	***40***
Word Snakes	***35***
Slalom	***60 (20+40)***
The Mysterious Four	***135 (30x4+15 bonus)***
Dutch Loop	***45 (20+25)***
Easy as ABC (diagonal)	***65 (30+35)***
Magnets	***80***
Doors	***60***
Arrow Web	***60 (35+25)***
Sudoku Extra Regions	***80***
Atomic Attraction	***65***
Islands	***80 (30+50)***
Mined Labyrinth	***55***
Hidden Word	***10***
Total	***1000 points***

1. Star Battle - 130 points (60+70)
Place two stars, the size of one square, in each column, each row and each outlined area of the grid. The stars do not touch each other, not even diagonally.
Example (with only one star):

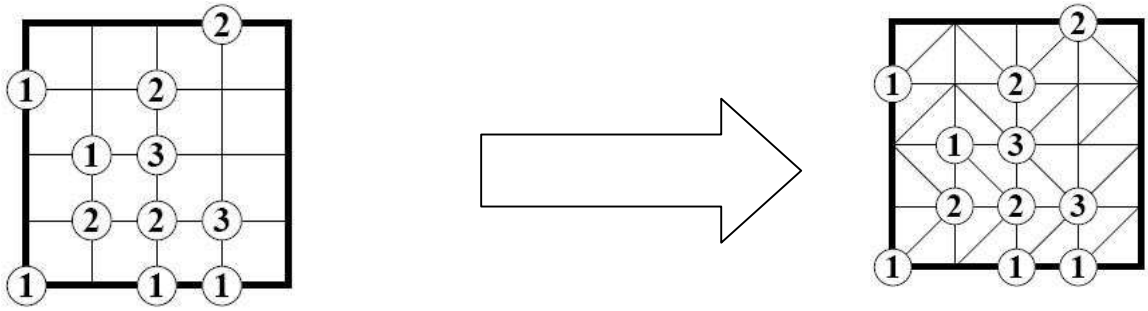


2. Kakuro - 40 points
Enter digits 1–9 in the grid - one per square - so that the digits in each series of white squares add up to the number in the accompanying definition cell. Digits can not repeat in a single answer.

3. Word Snakes - 35 points
Enter into the diagram all the words of the list. The first letter of each word is given just outside the grid. The following letters are written inside the diagram one after another in neighbouring cells, horizontally or vertically (in case of doubles, they need two different cells). Words can cross each other and a single word can use a letter more than once.
Example:



4. Slalom – 60 points (20+40)
For each cell draw exactly one of the two diagonals. No closed separate internal area may be created by the diagonals. Digits in the intersections indicate how many diagonals start from that point.
Example:



5. The Mysterious Four - 135 points (30x4+15 bonus)

The four puzzles are a Skyscrapers, a Minesweeper, a Battleships and another one of the previous three, not necessary in this order. It is part of the puzzle to find out which grid belongs to which puzzle. Clues can be internal and external:

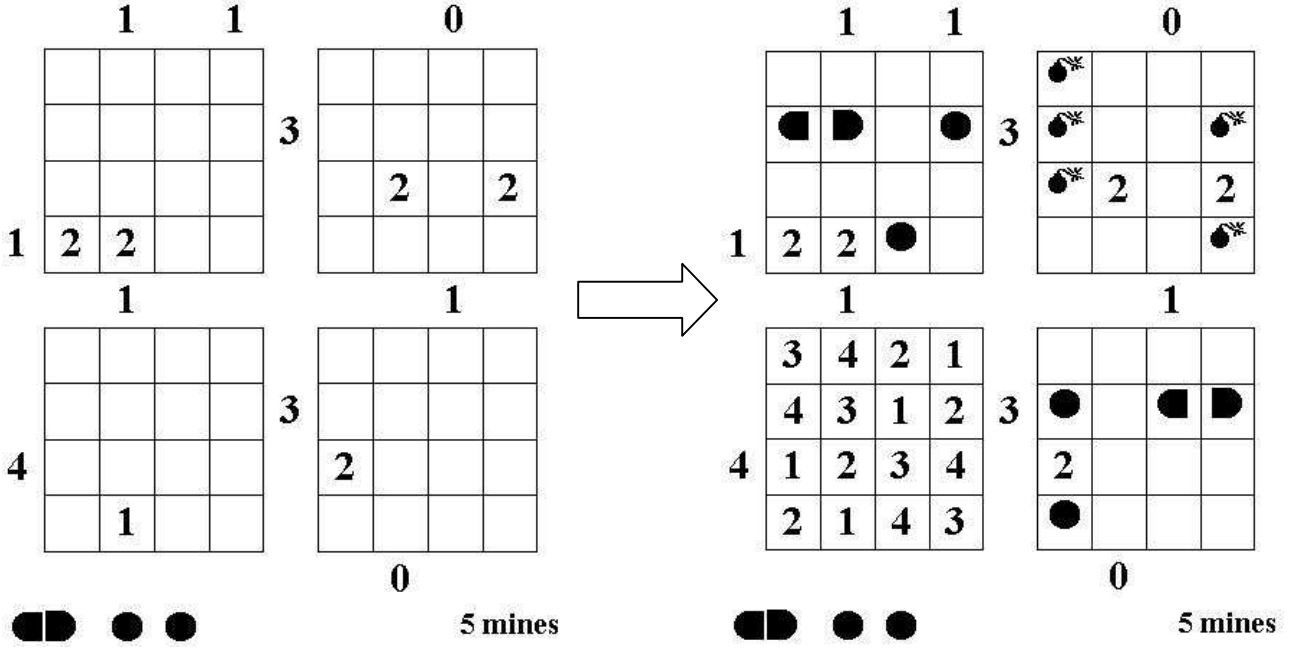
For Skyscrapers, an external clue shows the number of skyscrapers visible from that point of view, an internal one is the height of the skyscraper itself;

For Minesweeper, a clue (internal or external) shows the number of mines (inside the diagram) surrounding the cell; there are 12 mines for each diagram;

For Battleships, an external clue shows the number of cells occupied by ship elements in that row or column, an internal one the sum of the numbers of ship elements in the row and the column of the cell (fleet will be given).

A number between two grids is an external clue for both puzzles around it.

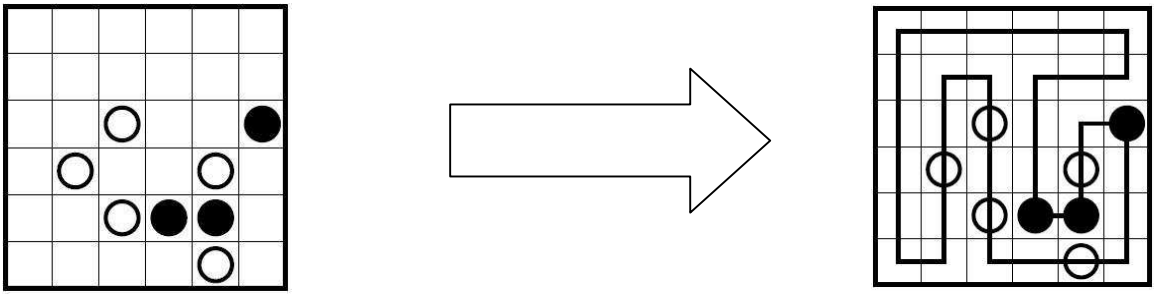
Example: (15 points bonus for solving all four).



6. Dutch Loop - 45 points (20 + 25)

Draw a single closed loop that passes through each square exactly once and never crosses or overlaps itself. The path travels horizontally and vertically, but never diagonally. In cells with a white circle the loop passes through, in cells with a black circle the loop makes a 90° turn.

Example:



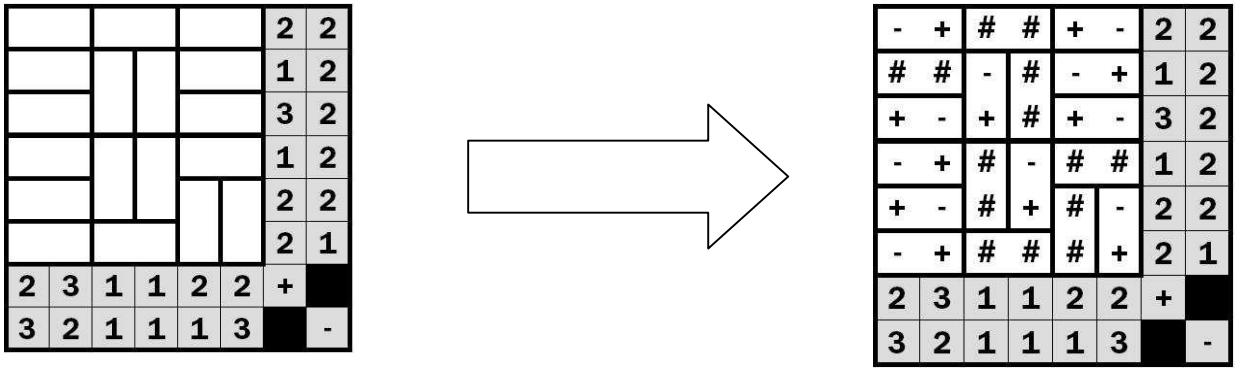
7. Easy as ABC (diagonal) – 65 points (30+35)

Fill the letters A, B and C in the diagrams. Each letter occurs exactly once in each row and column (and diagonal in the second puzzle). The letters outside the diagram indicate the letters you come across first from that direction.

8. Magnets - 80 points

The diagram contains magnetic and non-magnetic plates of size 2x1. Each magnetic plate has a positive (+) and a negative (-) part (pole). Poles with the same polarization cannot border on any side. However, their corners can touch. Non-magnetic plates can be placed next to any other plates, magnetic and non-magnetic ones each. The numbers of + and - polarizations in each row and column are indicated. Mark the position of all plates.

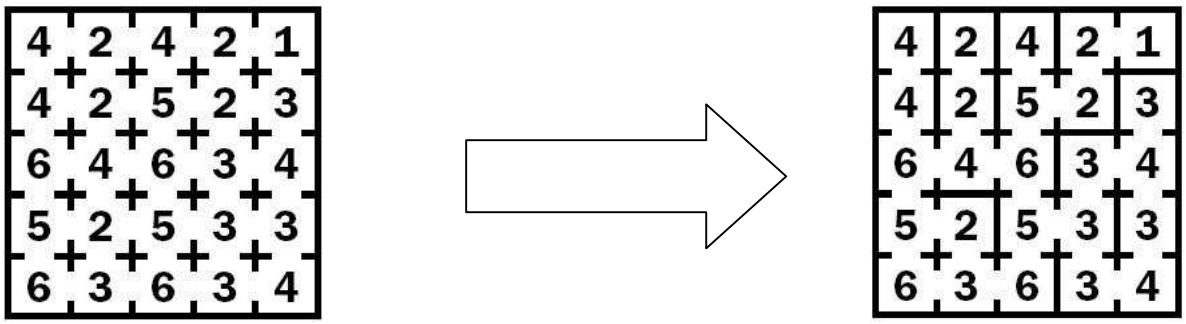
Example:



9. Doors - 60 points

Close some doors such that the numbers in the cells indicate how many rooms are visible from that cell, excluding the cell itself. All the rooms must be interconnected.

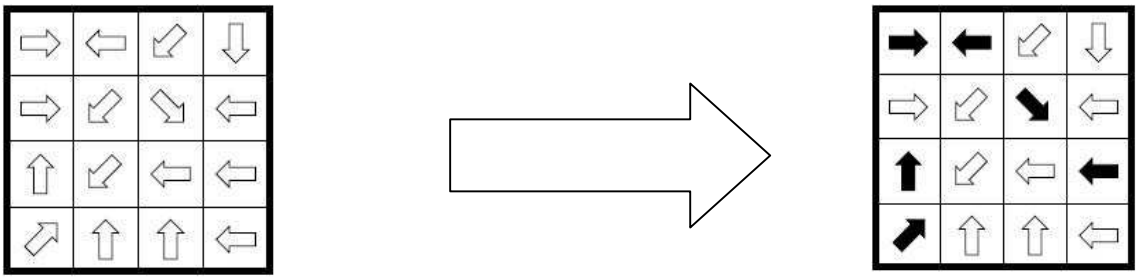
Example:



10. Arrow Web - 60 points (35 + 25)

Blacken some of the arrows such that each arrow (white or black) points to exactly one black arrow.

Example:



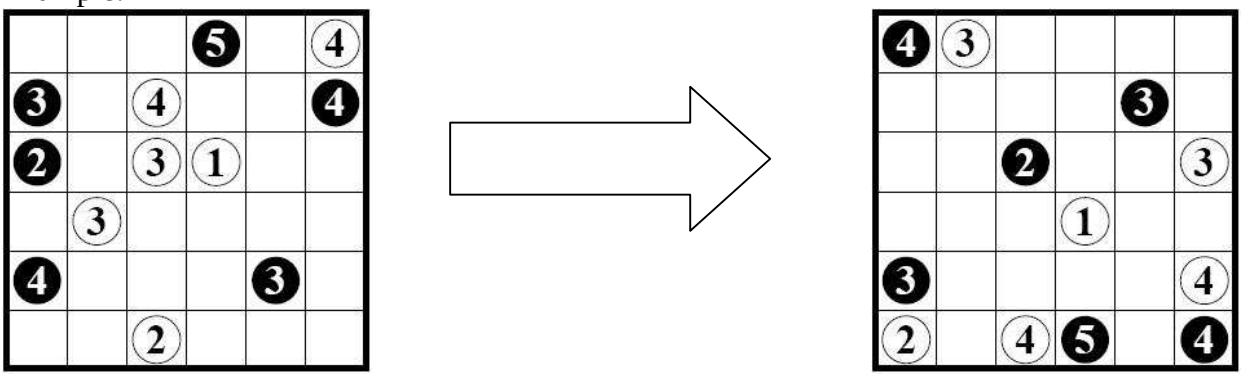
11. Sudoku extra regions – 80 points

Write numbers between 1 and 9 into the empty fields so that each number occurs in all rows, columns, 3x3 sectors and the two coloured regions exactly once.

12. Atomic Attraction - 65 points

Move every white and black atom the number of cells indicated on the atom itself, in one of the four directions. As a result of the movements, the atoms should be arranged into a set of molecules, each consisting of one black atom and one white atom that are glued horizontally, vertically or diagonally. Molecules may not touch each other, not even diagonally.

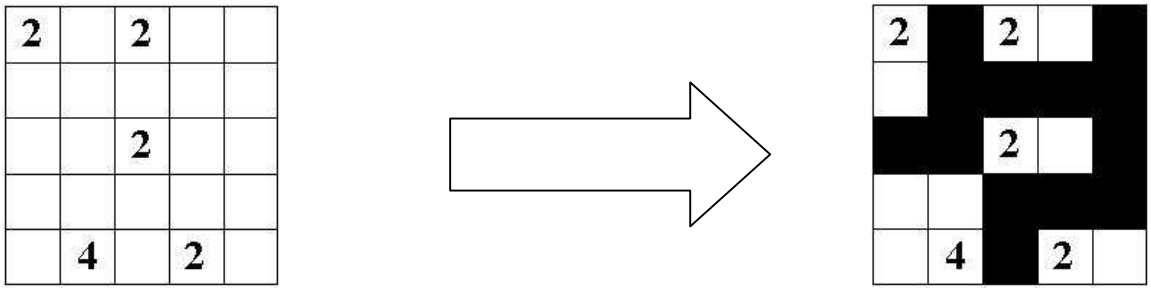
Example:



13. Islands – 80 points (30+50)

Blacken some cells such that each white region contains exactly one number and that number equals to the size of that white region. White regions can touch each other by a corner. Black cells can not form any 2x2 region and must be all interconnected. Numbered cells may not be blackened.

Example:

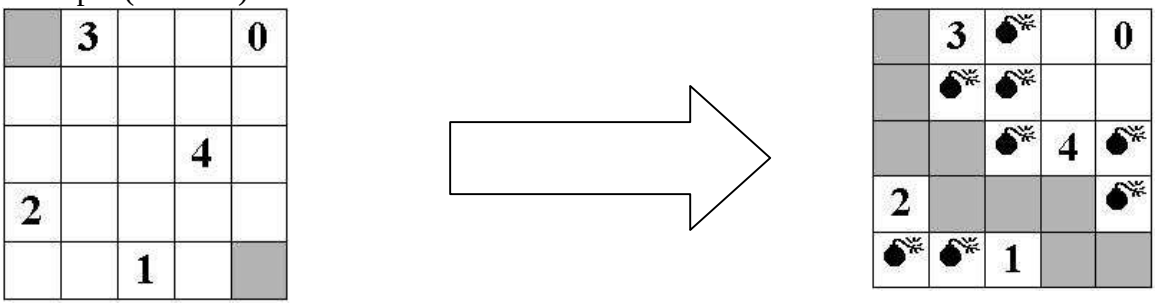


14. Mined Labyrinth - 55 points

There are 40 mines hidden in the diagram. Digits indicate the number of mines that can be found on the squares immediately adjacent to that square - horizontally, vertically or diagonally. Each square may contain at most one mine. Squares holding digits may not hold any mines.

Additionally, there must be at least one path formed by neighbouring empty cells (without numbers or mines), starting in the upper-left corner and finish in the lower-right one. It's enough to localize all the mines (it's not needed to draw one of the paths).

Example (**8 mines**):



15. Hidden Word – 10 points

No instructions (lenght of the word will be given).

NAME:	POINTS:

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4-6 NOVEMBER 2009
HOTEL BENTA
BUDAPEST

PUZZLES BY:

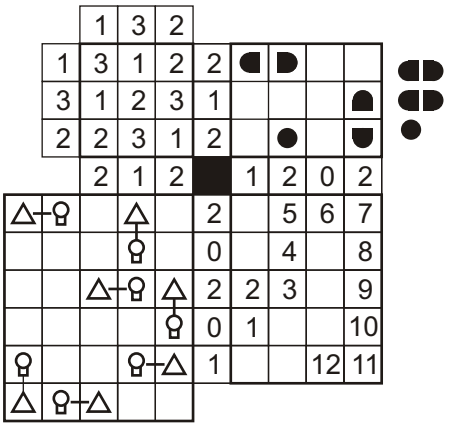
AZİZ ATEŞ
DEREN ÇAĞLAYAN

4 x 4 Puzzle	25/50/80/125 points
Triangular Skyscrapers	60 points
XO + Star Wars	40/90 points
Skyscrapers Sums of Skyscrapers Sums	40/80/90 points
Serendipity	60 points (30+30)
Masyu	35 points
Every Second Turn	30 points
Coded Fences	75 points (55+4x5)
Coded Kakuro	100 points (80+10x2)
Easy as ABC	30 points
Kropki	50 points
Magnets	70 points
Hexa Fences	55 points
Math Division	60 points
Battleships	70 points (30+40)
Total	**1000 points**

4 x 4 Puzzle (125 points)

4 different puzzles are connected with common hints. The puzzles are Skyscrapers, Battleships, Tents, Snake (30 squares length, 12 in the example). Hints between two puzzles are valid for both puzzles. In the example, the number „1" between skyscrapers and battleships shows that one skyscraper is seen from that side and also there is one part of a ship on that row. 1 Puzzle solved: 25 points, 2 puzzles solved: 50 points, 3 puzzles solved: 80 points, all puzzles solved: 125 points. To get partial points, your answer must be part of the complete solution.

Example:

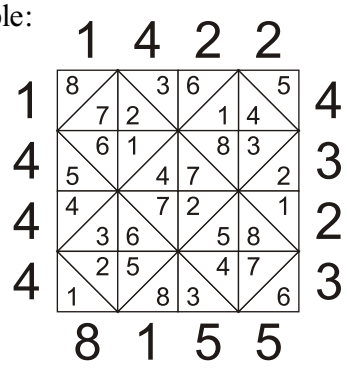


The hints above the black square show how many Skyscrapers can be seen in that direction, and also how many parts of ships there are on that row.
The hints on the right hand side of the black square show how many parts of ships there are on that column, and also how many corner the Snake has on that column.
The hint below the black square show how many corner the Snake has on that row, and also how many tents there are on that row.
The hints on the left hand side of the black square show how many Skyscrapers can be seen in that direction, and also how many tents there are on that column.

Triangular Skyscrapers (60 points)

Place all the given 32 triangular skyscrapers to the diagram so that the numbers, outside the grid, give the number of skyscrapers, which can be seen from that directions. The skyscrapers must have different heights in the rows and columns.

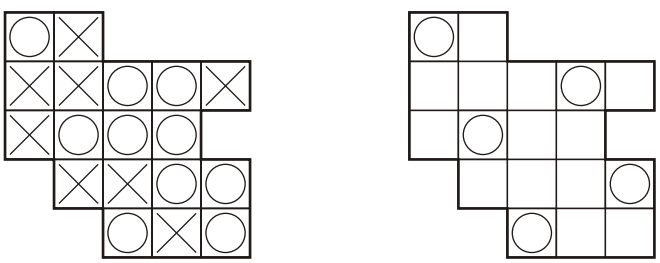
Example:



XO + Star Wars (40/90 points)

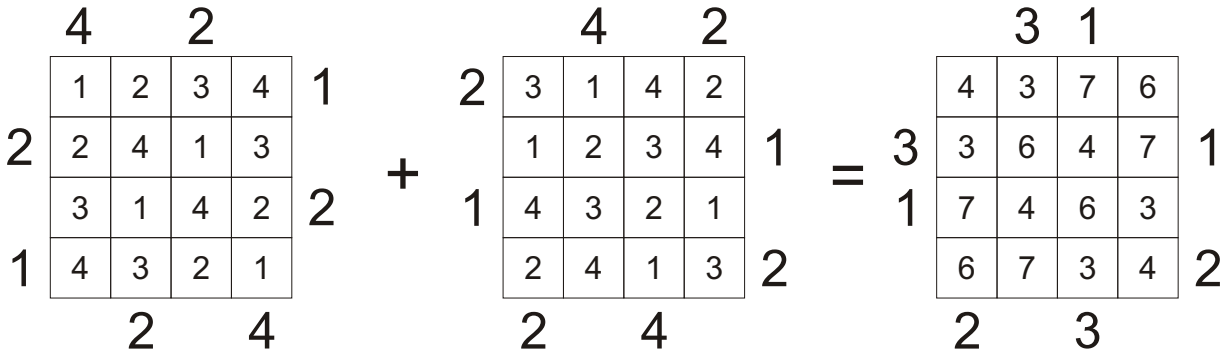
A XO puzzle and a star wars puzzle connected with a relation. If a square has a star in the star wars puzzle, the corresponding square in the XO puzzle must contain an O letter.
In XO puzzle, every square contains X or O letters, such that there is no four X's or four O's in horizontally, vertically or diagonally consecutive four squares.
In star wars puzzle, there are exactly two stars in every rows and columns. The stars do not touch each other, not even diagonally. 1 Puzzle solved: 40 points, 2 puzzles solved: 90 points. To get partial points, your answer must be part of the complete solution.

Example:



SKYSCRAPERS SUMS OF SKYSCRAPERS SUMS (40/80/90 POINTS)

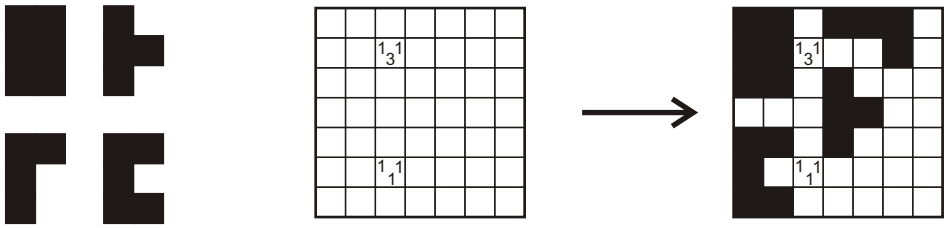
The grids symbolises a group of skyscrapers. In the fist two grids each row contains skyscrapers of different heights from 1 to 5 . In the third grid, the heights of skyscrapers are the sum of height of sksyscrapers, in the first two grid with same row and coloumn.The numbers outside the grids indicate how many skyscrapers are visible from that direction. 1 Puzzle Solved: 40 points, 2 Puzzle Solved: 80 points, 3 Puzzle Solved: 90 points.
Example:



SERENDIPITY (30+30 POINTS)

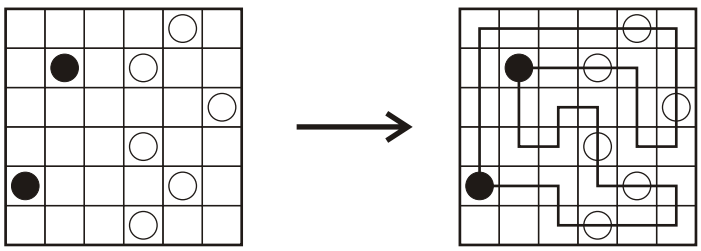
Paint some cells black so that all painted cells include the given tetromino set (OAPC letters for the example. Number/s in a cell indicate the lenght of black cell bloks on its neighbouring cells. If there is more than one number in a cell, there must be at least one white cell between the black cell bloks. There are no tetromino pieces on cells containing numbers. Tetrominoes cannot be mirrored and cannot toch each other even diagonally.

Example:



MASYU (35 POINTS)

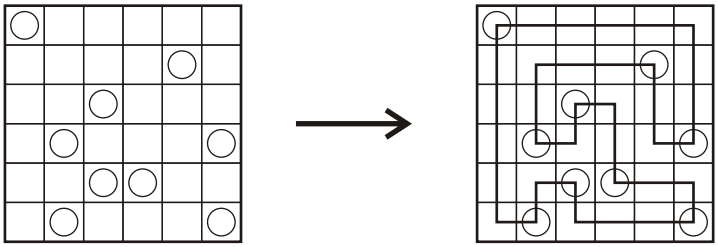
Moving between edge-to-edge neighbouring cells, draw a closed path passes through every circle and doesn't cross itself. The path must turn at every black circle, but can not turn immediately before or after. The path can not turn at any white circle, but must turn immediately before and/or after.
Example:



EVERY SECOND TURN (30 POINTS)

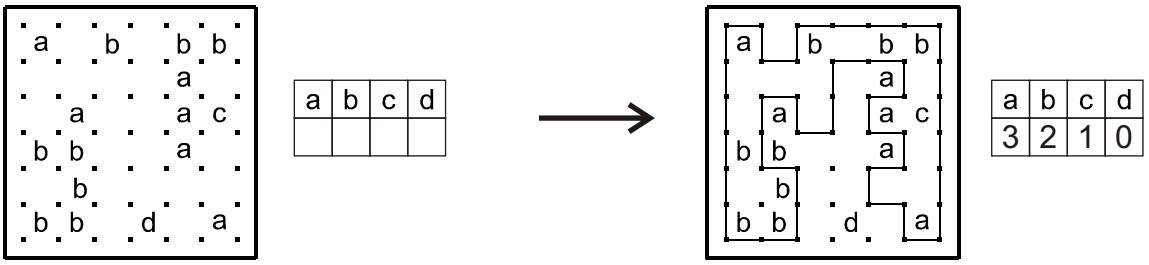
Draw a continuous loop in such a way that every second corner point should be in a square containing a circle. The loop crosses each square exactly once and must not intersect or overlap itself anywhere. The loop must turn when it passes through a square containing a circle.

Example:



CODED FENCES (55+4X5 POINTS)

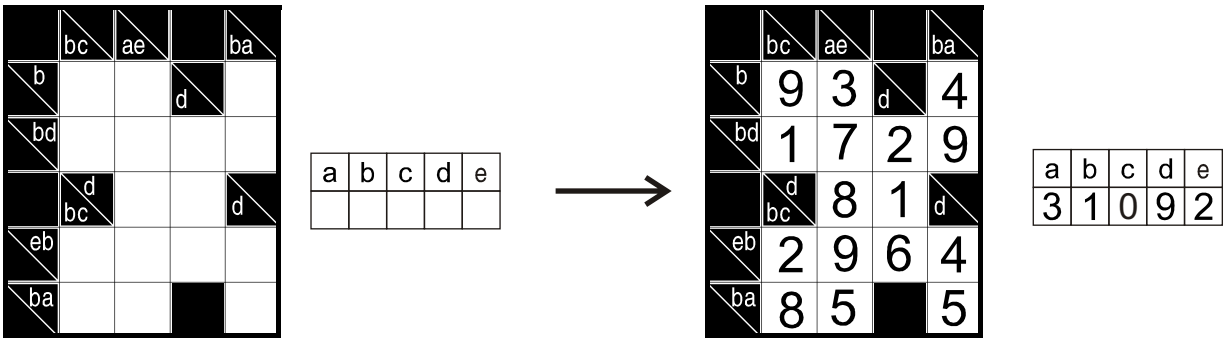
a, b, c and d represents different numbers. Draw a continuous loop in such a way that the number of edges used by the loop in a square with a letter is equal to the number represented by the letter. For each letter whose code founded gets 5 points. The Puzzle gets 55 points.
Example:



CODED KAKURO (80+10X2 POINTS)

Letters represents different digits. Enter a single digit from 1 to 9 in each empty square so that the horizontal sums of the digits will equal the number given on the left, and the vertical sums of the digits will equal the number given above. No digit can be repeated within sums. Each letter whose code founded gets 2 points. Puzzle gets 80 points.

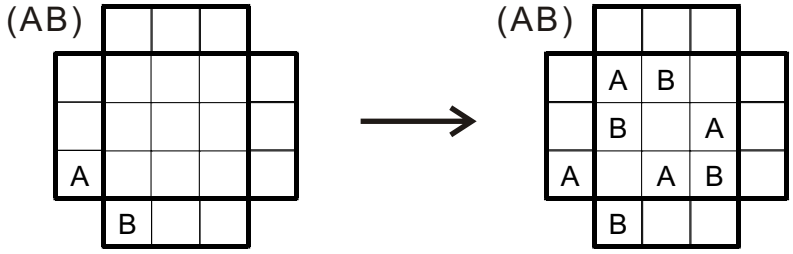
Example:



EASY AS ABC (30 POINTS)

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

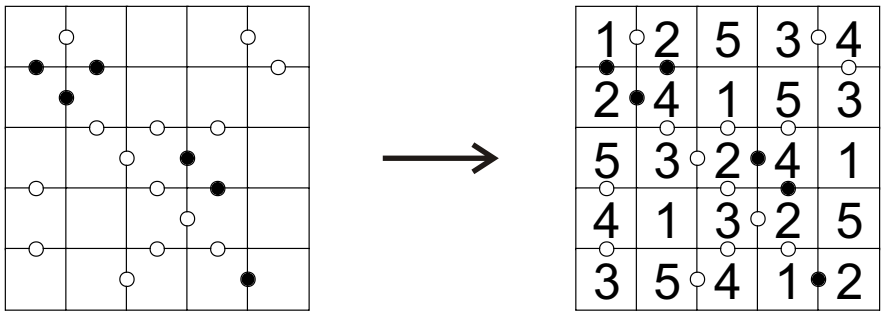
Example:



KROPKI (50 POINTS)

Fill the grid with digits from 1 to 6, so that each digit appears exactly once in every row and every column. If the absolute difference between two digits in neighbouring cells equals 1, then they're separated by a white dot. If one of the two digits in neighbouring cells is exactly half of the other in value, then they're separated by a black dot. The dot in between any "1" and "2" can be black OR white, and not necessarily consistent throughout the puzzle.

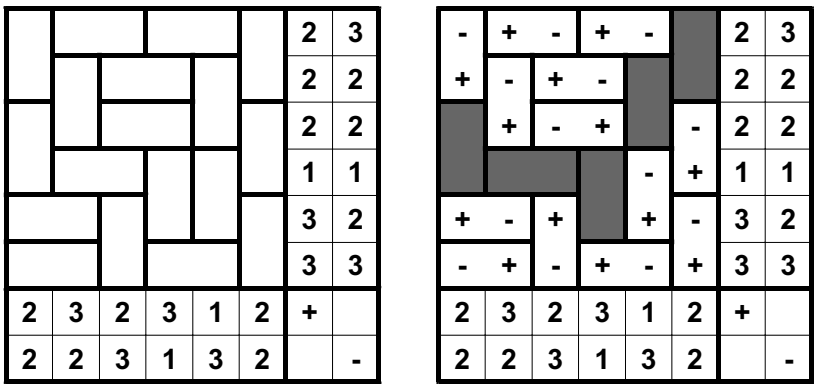
Example:



MAGNETS (70 POINTS)

The grid is made up of magnetic and non-magnetic plates. Each magnetic plate has two halves: one positive (+) and one negative (-). Halves with the same symbol cannot be connected horizontally or vertically. The numbers outside the grid indicate the amount of magnetic halves in that particular row or column.

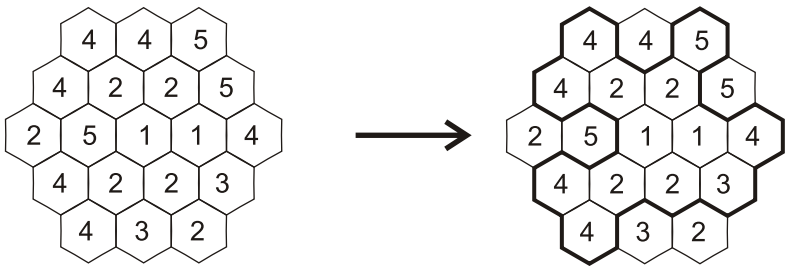
Example:



HEXA FENCES (55 POINTS)

Draw a single continuous loop along the edges of hexa-cells. A numbered cell indicates exactly how many of its six edges are used by the path.

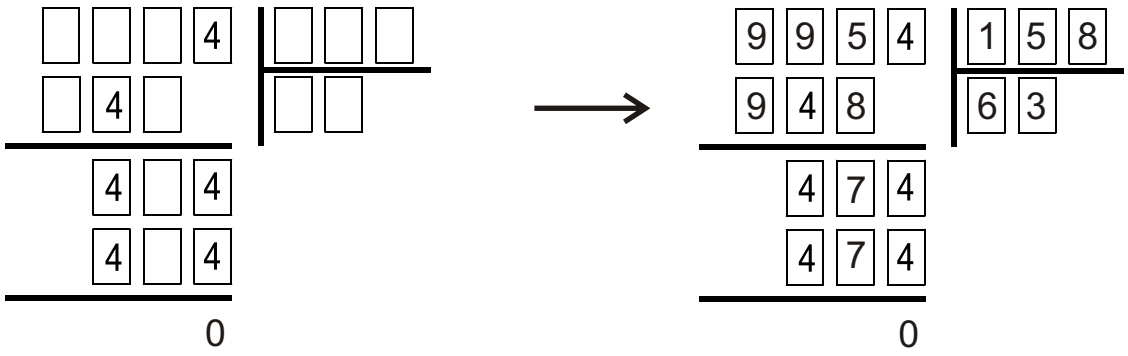
Example:



MATH DIVISION (60 POINTS)

Complete the division of numbers. All 4's are given.

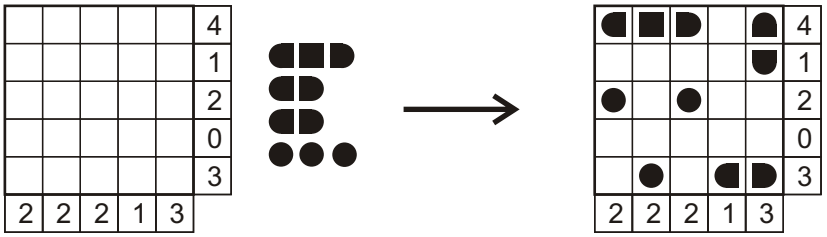
Example:



BATTLESHIPS (30+40 POINTS)

Place the given standard fleet into the diagram. The ships cannot touch each other, not even diagonally. The numbers next to the diagram indicate the number of squares occupied by ships in the corresponding row or column.

Example:



NAME:	POINTS:

10TH 24 HOURS PUZZLE CHAMPIONSHIP

4-6 SEPTEMBER, 2009
HOTEL BENTA
BUDAPEST

PUZZLES BY
HASAN YURTOGLU

1.	AKKARA	50 Points
2.	AKKARA LOOP	50 Points
3.	AKKARA SHIPS	50 Points
4.	AKKARA SNAKE	50 Points
5.	AKKARA TETROMINO	50 Points
6.	AKKARA 24HRS	60 Points
7.	AYDA X	50 Points (20+30)
8.	BLOCKAP	80 Points
9.	CHEKSUM	70 Points (35+35)
10.	CHECKSUM APARTMENTS	70 Points (35+35)
11.	DIAMOND ISLANDS	40 Points (15+25)
12.	FLOWER	30 Points (15+15)
13.	FLOWER BUNCH	80 Points
14.	HEXIAMOND	100 Points
15.	OPCHANGE	40 Points (10+10+10+10)
16.	OPHOOP	40 Points (20+20)
17.	TACTIC SUM	90 Points (30+30+30)

10TH 24 HOURS PUZZLE CHAMPIONSHIP
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BUDAPEST

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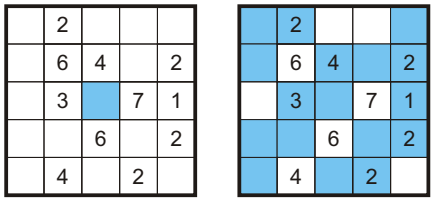
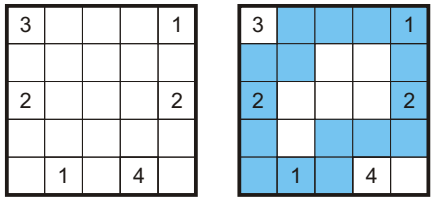
1. AKKARA (50 Points)

Paint some cells such that; numbers which are painted show how many non-painted neighbour cells including diagonals and also numbers which are non-painted show how many painted neighbour cells including diagonals. Some painted cells may be given.



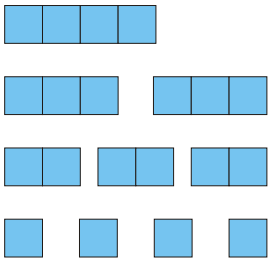
2. AKKARA LOOP (50 Points)

Paint some cells to form a single closed loop not touching itself from diagonals.
Numbers which are painted show how many non-painted neighbour cells including diagonals and also numbers which are non-painted show how many painted neighbour cells including diagonals.



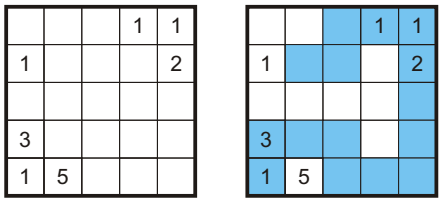
3. AKKARA SHIPS (50 Points)

Find the locations of all painted battleship pieces shown. Pieces can be rotated. No two pieces touch from sides or corners.
Numbers which are painted show how many non-painted neighbour cells including diagonals and also numbers which are non-painted show how many painted neighbour cells including diagonals.



4. AKKARA SNAKE (50 Points)

Paint some cells to form a single snake not touching itself from diagonals.
Numbers which are painted show how many non-painted neighbour cells including diagonals and also numbers which are non-painted show how many painted neighbour cells including diagonals.



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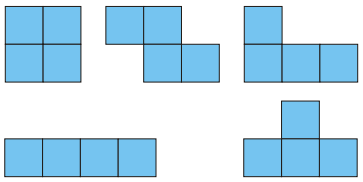
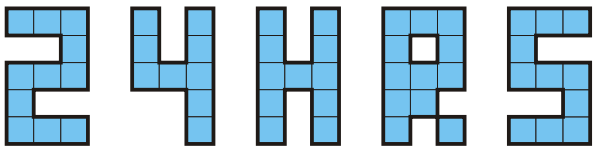
5. AKKARA TETROMINO (50 Points)

Find the locations of painted 5 tetromino pieces shown. Pieces can be rotated but cannot be reflected. No two pieces touch from sides or corners.
Numbers which are painted show how many non-painted neighbour cells including diagonals and also numbers which are non-painted show how many painted neighbour cells including diagonals.



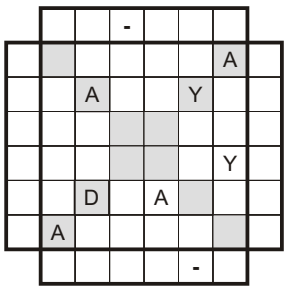
6. AKKARA 24HRS (60 Points)

Find the locations of painted characters of 24HRS shown. Characters will not touch from sides and diagonals. Also characters may be rotated but cannot be flipped.
Numbers which are painted show how many non-painted neighbour cells including diagonals and also numbers which are non-painted show how many painted neighbour cells including diagonals.



7. AYDA X (20 + 30 Points)

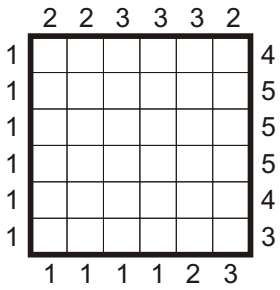
AYDA name must be read in every row, column and 2 main diagonals foreward or backward.

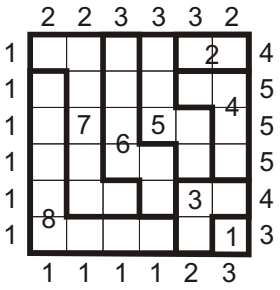


A	-	-	A	A	-	
-	-	-	A	Y	D	A	-
-	-	A	-	-	Y	D	A
A	D	-	Y	-	A	-	-
A	-	-	-	D	-	Y	A
A	Y	D	-	A	-	-	-
-	A	Y	D	-	-	A	-
	-	A	A	-	-	-	

8. BLOCKAP (80 Points)

Divide the platform on lines into 8 regions having areas 1 to 8. No two regions have same areas. There is no 2x2 areas in regions. Every region is a single apartment having floors.
The number of areas and the number of floors are same. Numbers outside the grid show how many apartments seen in that direction.





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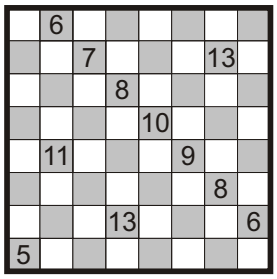
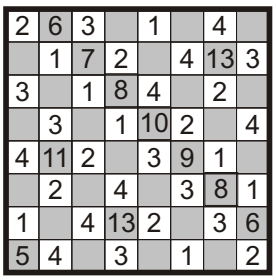
9. CHECKSUM (35 + 35 Points)

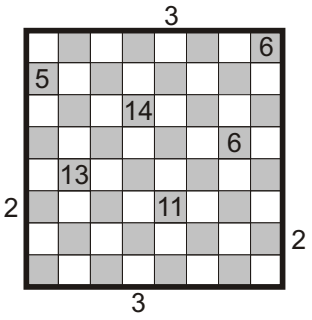
Place numbers 1 to 4, each once, in only white cells of each row and column. Numbers in gray cells are sum of four white neighbour cells.

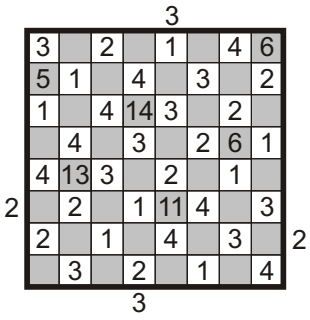




10.CHECKSUM APARTMENTS(35+35 Points)

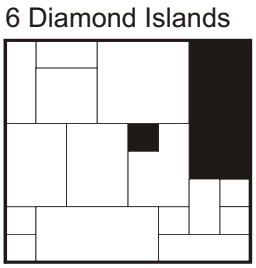
Place apartments of having floors 1 to 4, each once, in only white cells of each row and column. Numbers in gray cells are sum of four white neighbour cells.
Numbers outside the grid show how many apartments seen in that direction.

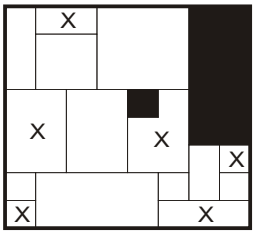




11. DIAMOND ISLANDS (15+25 Points)

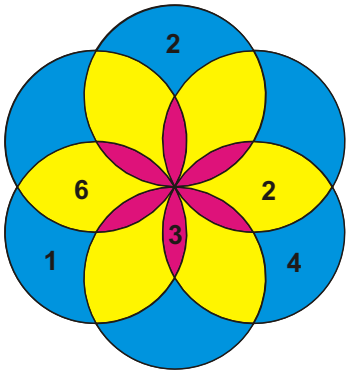
Find all diamond islands according to given total islands. No diamond islands touch another from sides and corners and also there is no diamond islands in black regions.

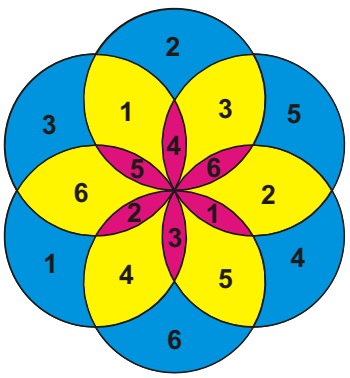




12. FLOWER (15+15 Points)

Every leaf having same colour and every circle must have the numbers 1 to 6. Each region have only one number. Find all the numbers inside the flowers.





PUZZLES BY
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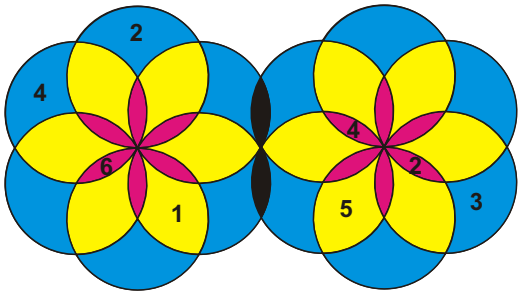
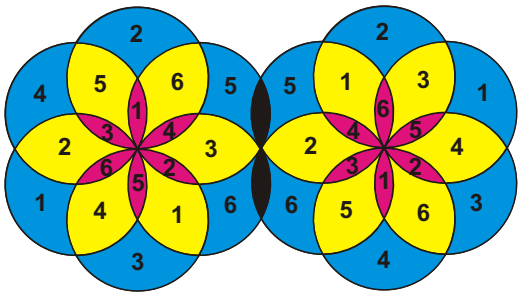
13. FLOWER BUNCH (80 Points)

7 flowers (in example 2) attached from outer leafs with black regions. Outer leafs having black regions have the same numbers.

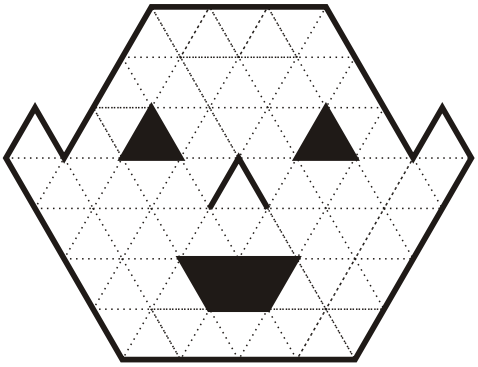
Every leaf having same colour and every circle must have the numbers 1 to 6. Each region have only one number. Find all the numbers inside the flowers.

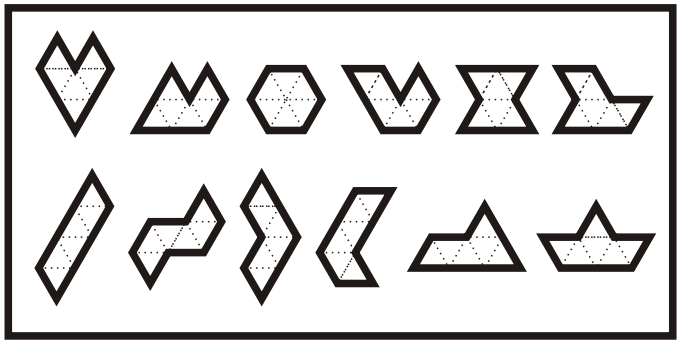


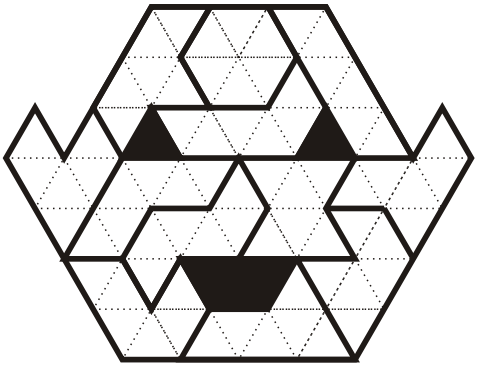


14. HEXIAMOND (100 Points)

Put 12 hexiamond into the platform such that no piece cut the lines and no piece on shaded regions. Pieces can be rotated but can not be reflected. There is one more platform for trial.







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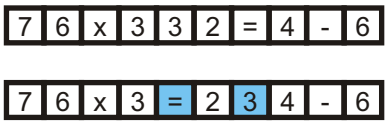
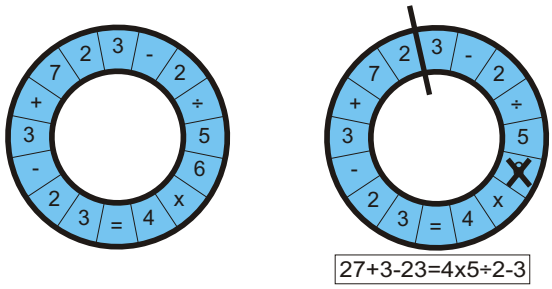
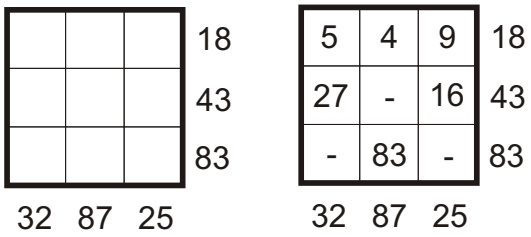
15. OPCHANGE (10+10+10+10 Points)
Correct the given wrong equations with changing two boxes.



16. OPHOOP (20+20 Points)
Cut the hoop on a line and remove one cell so that there will be a correct equation beginning from cut and read counterclockwise.



17. TACTIC SUM (30+30+30 Points)
Place the numbers 1 to 9 into the grid. A cell could have no number, 1 number or 2 numbers. The cells having 2 numbers are 2 digits numbers in the cells. Numbers outside the grid show the sums of numbers in that row or column. In a column or row there could be one number also, in that case number outside the grid is that number alone.



NAME:	POINTS:

10TH 24 HOURS PUZZLE CHAMPIONSHIP

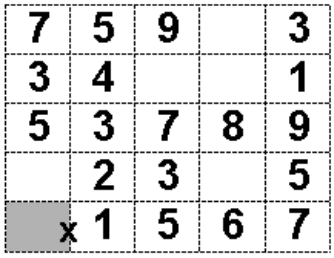
4-6 SEPTEMBER, 2009
HOTEL BENTA
BUDAPEST

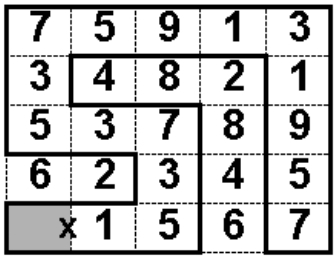
PUZZLES BY
RAJESH KUMAR
ASHU GUPTA
http://wpcStylePuzzles.blogspot.com

Consecutive Loop	30 points
Dot-Rundweg	45 points (20 + 25)
Polygraph	30 points
Wolves and Sheep in Fences	20 points
Inside/Outside Corral	30 points
Range	20 points
Wittgenstein Briquet	60 points (20 + 40)
Akkoy	65 points (25 + 40)
Copycope	20 points (10 + 10)
Smashed Sums	40 points
Kuromasu	60 points
Arrow Loop	40 points (20 + 20)
TREN	120 points (30 + 35 + 55)
Toplamatik	40 points
Tripod Sudoku	55 points (25 + 30)
The Persistance of Memory	15 points (5 + 10)
QuickSort	20 points
Hamle	80 points (15 + 65)
4 Minesweepers	55 points
Snail Sudoku	80 points
Slash Pack	15 points
Top Heavy Number Place	35 points
Paravan	25 points

1. Consecutive Loop (30)

Fill the grid with digits 1-9 so that no digit is repeated within a row/column. Each pair of consecutive neighbors should have a line between them, forming a closed loop. All lines should be part of the loop. There cannot be any loop lines in the crossed places, and some lines may be already given. Also if there is block, it cannot contain any number but its sides can be the part of the loop.

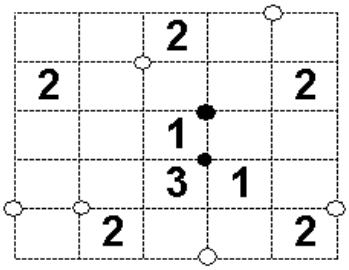


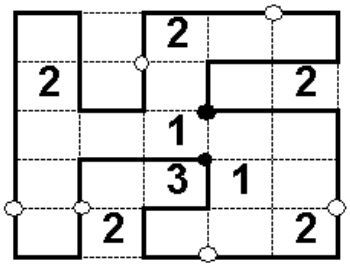


2. Dot-Rundweg (20 + 25)

Draw a loop into the diagram following the gridlines, which does not touch or cross itself. A digit in a cell indicates the amount of its edges used by the loop. The loop should pass through all the circles (both black and white). The circles in the diagram follow the following-rules:

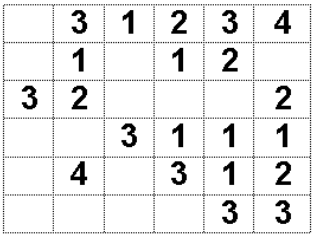
1. The path must turn at every black circle.
2. The path cannot turn at any white circle, but must turn immediately before and/or after.

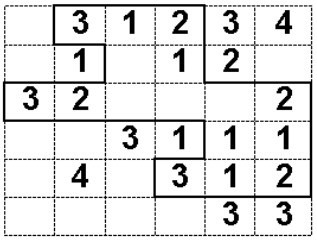




3. Polygraph (30)

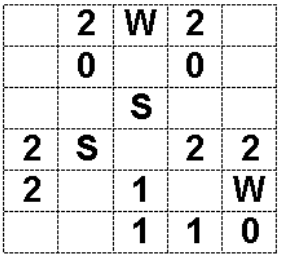
Draw a single continuous loop by connecting neighboring dots horizontally or vertically. The clues inside the loop indicate the number of its edges used by the loop. The clues outside the loop indicate the number of its edges NOT used by loop.

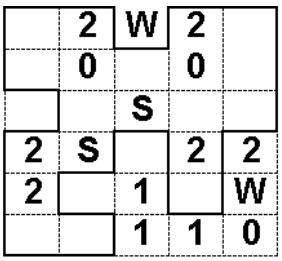




4. Wolves and Sheep in Fences (20)

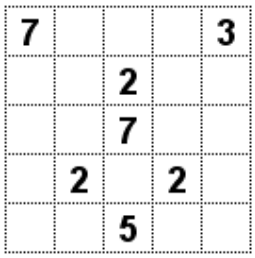
Draw a single closed loop by connecting neighboring dots horizontally or vertically (but not diagonally). A numbered square indicates exactly how many of its edge segments are used by the path.
A square containing a sheep ("S") must end up inside the loop; a square containing a wolf ("W") must end up outside the loop.

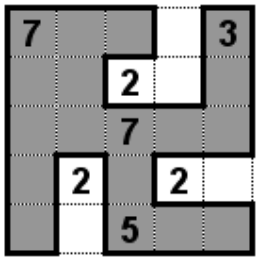




5. Inside/Outside Corral (30)

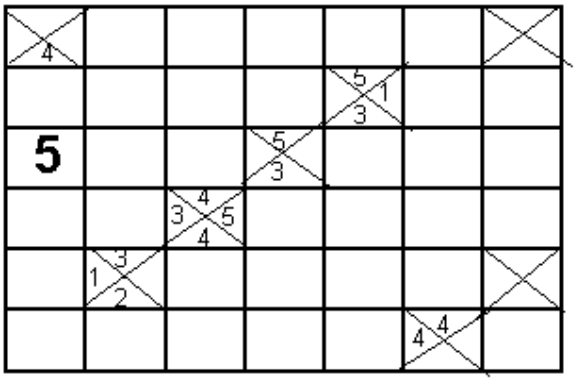
Draw a single closed loop along the grid lines. If a number is inside the loop then it equals the count of interior squares that are directly in line (horizontally and vertically) with that number's square, including the square itself. Similarly, if a number is outside the loop then it equals the count of exterior squares that are directly in line with that number's square, including the square itself.

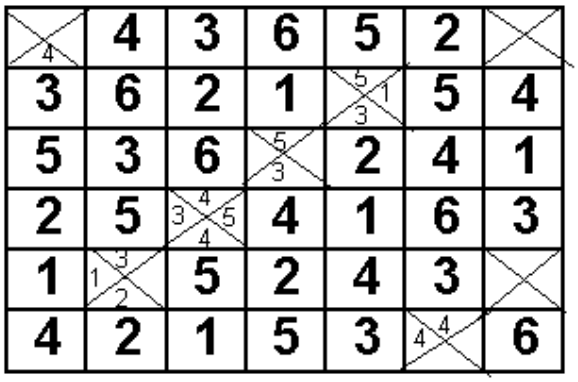




6. Range (20)

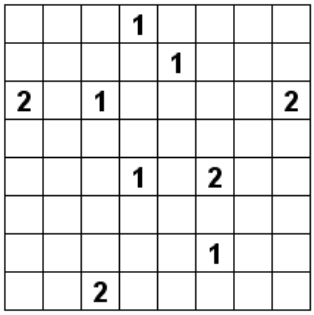
Place digits 1-6 in the grid so that no digit is repeated within a row/column. Numbers in the diagram indicate the difference between the biggest and smallest digit in the visible cells. A digit can seen others until its view is blocked with a triangled cell. If there is only one cell in sight, the number indicates the digit itself. No cell may remain empty.

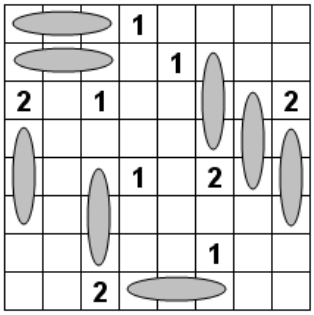




7. Wittgenstein Briquet (20 + 40)

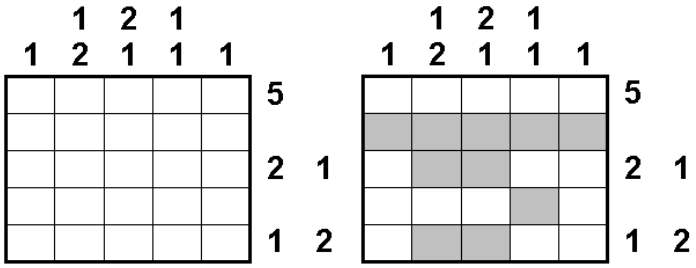
Locate some blocks in the grid, each having the size 1x3. The numbers in the diagram indicate the number of blocks touching their cells from the sides. All remaining cells should be connected to each other orthogonally.





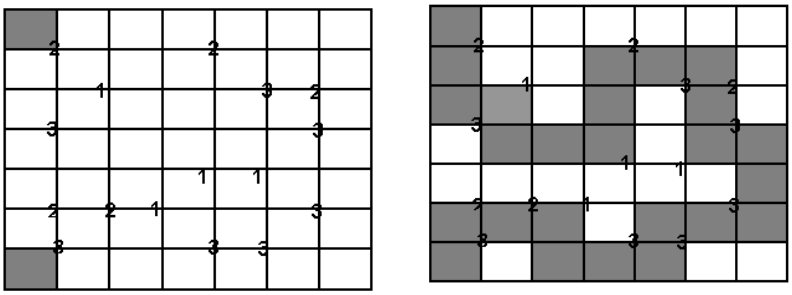
8. Akkoy (25 + 40)

Paint some cells black so that unpainted cells form at least two areas of the same size. Areas should be formed of edge-to-edge neighboring cells and they can touch each other only diagonally. Numbers at the top indicate the amount of black cells blocks in the corresponding column. Numbers at the right indicate the amount of white cell blocks in the corresponding row.



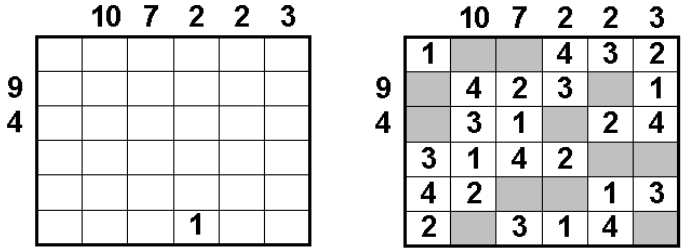
9. Copycope (10 + 10)

Locate a snake in the grid that travels from left to bottom right, without touching itself even at a point. Numbers inside the grid indicate the amount of cells occupied by the snake in the neighboring squares.



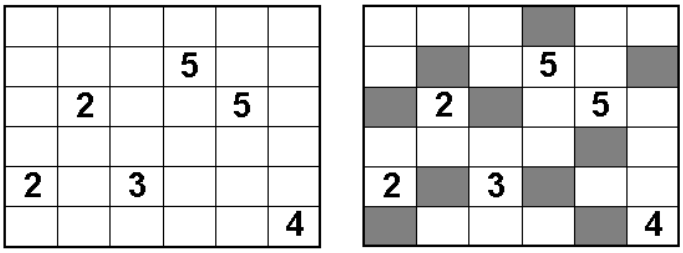
10. Smashed Sums (40)

Fill the grid with digits 1-5 (in example from 1-4), so that no digit is repeated in each row or column. Additionally, exactly two squares in each row and column should be blackened. Numbers outside the grid indicate the total of cells between the blackened squares in the corresponding row/column.



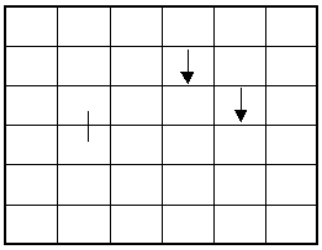
11. Kuromasu (60)

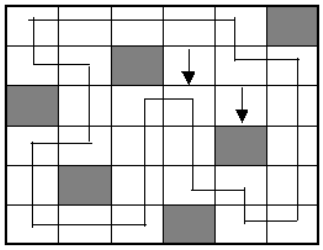
Add black squares to the grid (only in the empty spaces) so that each number equals the count of white squares that are directly in line (horizontally and vertically) with that number's square, including the numbered square itself. Black squares cannot share an edge, and all remaining white squares must be connected orthogonally.



12. Arrow Loop (20 + 20)

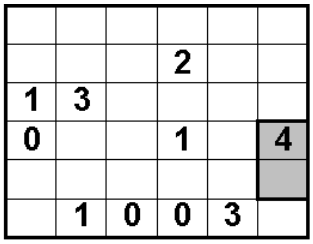
Black some of the Squares in such a way that each row and each column contains Exactly one Black Square. Arrow if given points to the Black Square in the corresponding row or column. Remaining squares form a Single closed loop. Also Square containing Arrow is not part of loop. Some part of the loop may be already given. Also some of the black square may be already given.

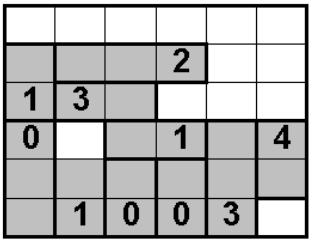




13. TREN (30 + 35 + 55)

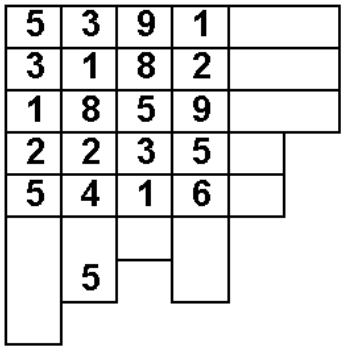
Locate some blocks in the grid, having the size either 1x2 or 1x3. Each number in the grid should be part of a block, indicating the amount of the possible movements of the block. Blocks can only move in the direction of their short edge.

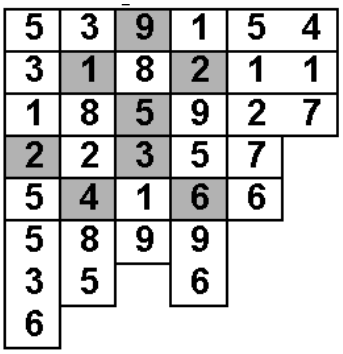




14. Toplamatik (40)

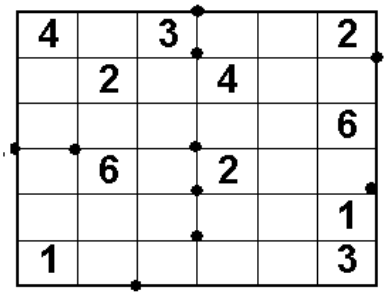
Blacken some cells so that remaining cells form some numbers. The figures outside the grid holds the sum of these numbers and size of these figures indicate how many digits are there in the sum of the numbers in the corresponding direction. There are at least two numbers in every row and every column. Numbers are read either from left to right or from top to bottom.

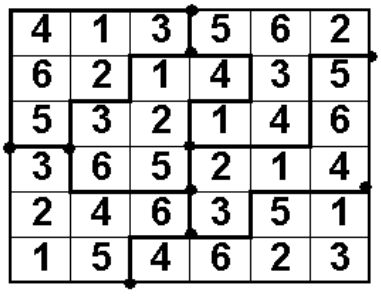




15. Tripod Sudoku (25+30)

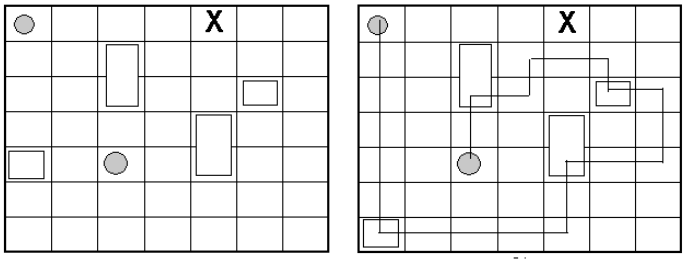
Fill the grid with digits 1-6 and divide the grid into some regions, so that each digit appears exactly once in every row, column and region. All points where three lines meet are given. There are no points where four lines meet.





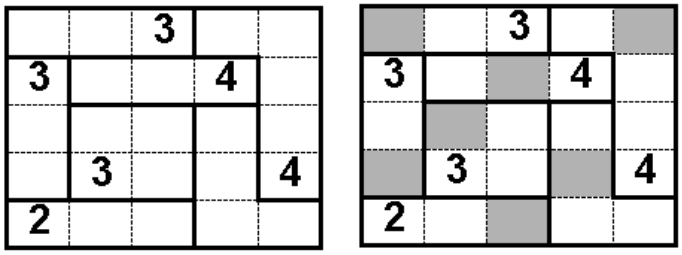
16. The Persistence of Memory (5 + 10)

Locate a snake in the grid that travels horizontally and vertically, without touching itself even at a point. All regions contain part of the snake. The regions having the same shape have the same appearance, without any rotations. The head and tail of the snake are given. Square containing 'x' should not contain any part of snake.



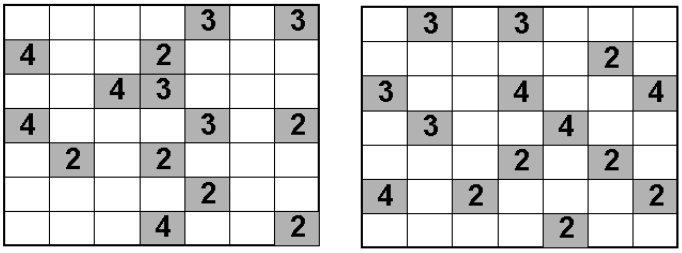
17. Quicksort (20)

Blacken some cells in the diagram so that there is only one blackened square in every outlined region. Black squares cannot touch each other from the side and all the white cells must be interconnected. Numbers in the diagram indicate the amount of the white cells seen from that square (in four directions) including itselves. Square with number cannot be blackened.



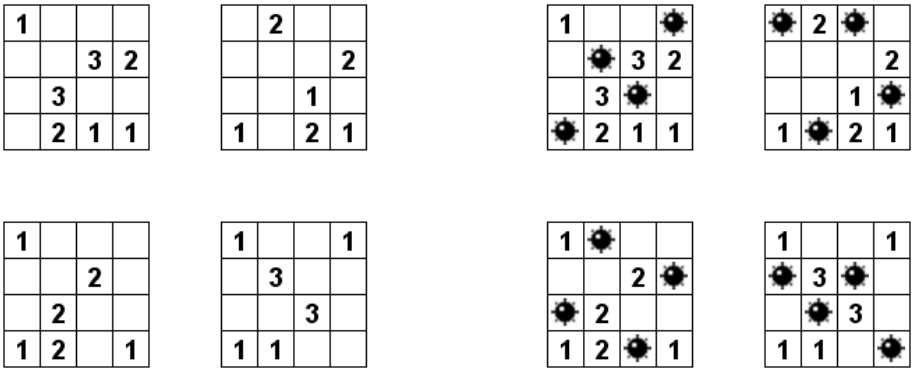
18. Hamle (15 + 65)

Move every black square in one of the four directions, so that numbers in the black cells indicate the length of their moves. When all moves are done, all white cells should be interconnected and black cells should not touch each other from the sides.



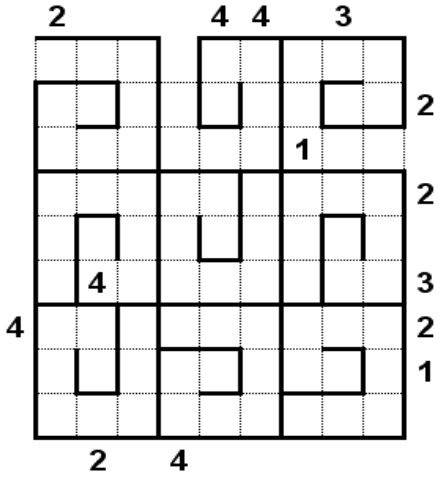
19. 4 Minesweepers (55)

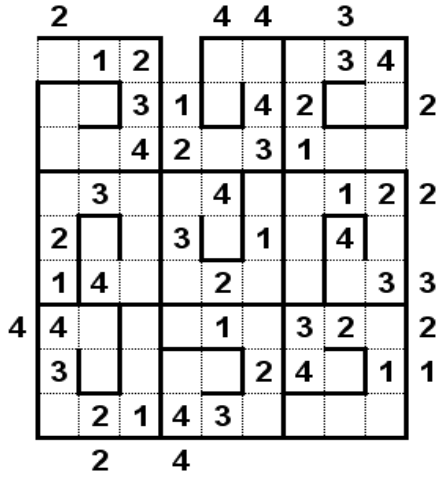
Place some mines in each diagram so that the numbers inside the grid indicate the amount of mines in the neighboring cells. When all four puzzles are solved, every single coordinate should exactly contain one mine.



20. Snail Sudoku (80)

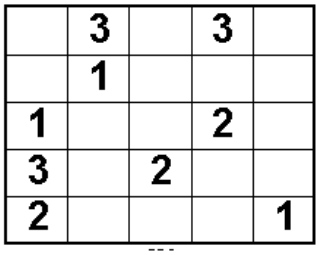
Fill the grid with digits 1~4, so that each digit appears exactly once in every row, column and every 3x3 spiral. Digits should be placed orderly in the spirals, from the entrance to the center. The numbers outside the grid indicate the first seen number from that direction.

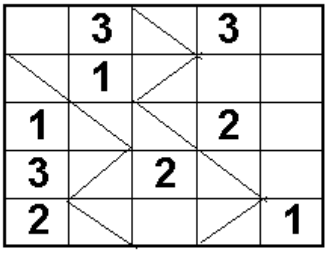




21. Slash Pack (15)

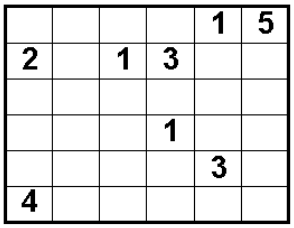
Divide the grid into shapes, using only the diagonals of the squares, without any loose ends. Each shape must contain numbers from 1 to N (where N is maximum number). Two diagonal cannot cross in one square.





22. Top Heavy Number Place (35)

Fill the grid with digits 1 to 5, so that each digits appears exactly once in every row/column. Where the digits adjoin vertically, the upper digit must be bigger.



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

23. Paravan (25)

Place digits from 1 to 6 in the grid so that no digit is repeated within a row/column. Some cells should be blackened in order to avoid a digit see it's consecutive in a row/column. A digit can see others in a straight line until its view is blocked with a black cell. Blackened cells cannot touch each other from the sides. No cell can remain empty.

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

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

NAME:	POINTS:

10TH 24 HOURS PUZZLE CHAMPIONSHIP

4-6 SEPTEMBER, 2009
HOTEL BENTA
BUDAPEST

PUZZLES BY

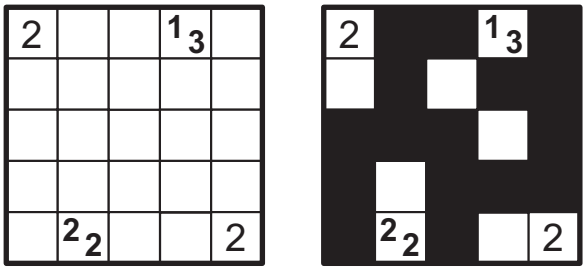
SERKAN YUREKLI

INSTRUCTIONS

1. Tapa	50 points (10+15+25)
2. Psycho Killer	60 points (30+30)
3. Tren	40 points (15+25)
4. Word Stairs	30 points
5. The Persistence Of Memory	35 points (15+20)
6. Hamle	60 points (20+40)
7. Tripod Sudoku	45 points (20+25)
8. Sum Islands	70 points (20+50)
9. Diagramless Kakuro	55 points
10. Mr Universe	100 points
11. Briquet	65 points
12. Snail Sudoku	45 points
13. Rehber	100 points
14. Snake Egg	55 points
15. Comet	40 points (15+25)
16. Tapa Pentopool	65 points (20+45)
17. Tetroscope	25 points
18. Japanese Sums & Battleships	60 points (25+35)

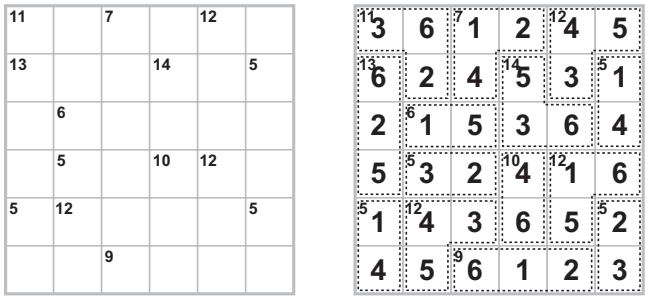
1. Tapa

Paint some squares black to create a continuous wall. Number/s in a square indicate 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. Painted cells cannot form a 2x2 square or larger. There are no wall segments on cells containing numbers.



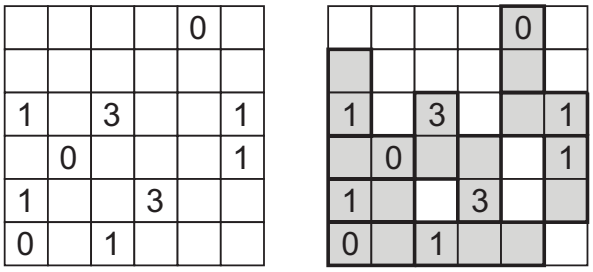
2. Psycho Killer

Fill the grid with digits 1-6 so that each digit appears exactly once in every row and column. The puzzle is a Killer Sudoku puzzle with missing regions. Determine the regions and solve the puzzle. Each region contains its sum in the cell which is the first left cell of the topmost cells. There is no region that contains only one digit. No digit can be repeated within a sum.



3. Tren

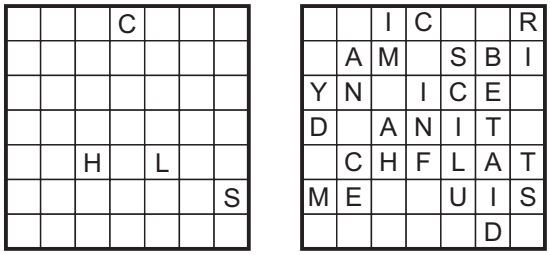
Locate some blocks in the grid, having the size either 1x2 or 1x3. Each number in the grid should be part of a block, indicating the amount of the possible movements of the block. Blocks can only move in the direction of their short edge.



4. Word Stairs

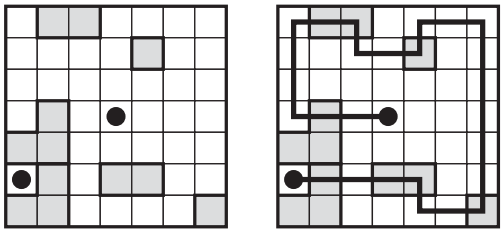
Place all given words in the diagram so that no letter is repeated within a row/column. All words should be placed like stairs (e.g. up-left-up-left). Words can cross or overlap each other. Some letters are already given.

FLUID
MECHANICS
DYNAMIC
STATIC
CEBIR



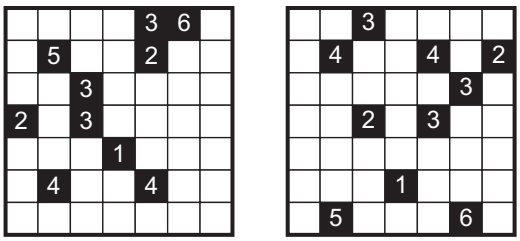
5. The Persistence Of Memory

Locate a snake in the grid, that travels horizontally and vertically, without touching itself even at a point. All regions contain parts of the snake. The regions having the same shape should have the same appearance, without any rotations. The head and tail of the snake are given.



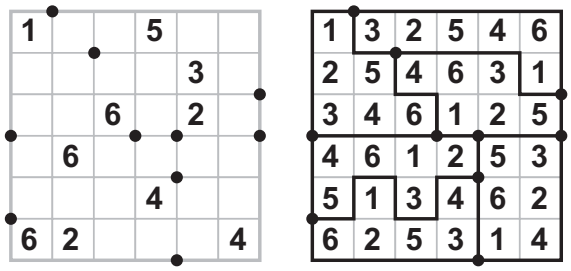
6. Hamle

Move every black square in one of the four directions, so that numbers in the black cells indicate the length of their moves. When all moves are done, all white cells should be interconnected and black cells should not touch each other from the sides.



7. Tripod Sudoku

Fill the grid with digits 1-6 and divide the grid into some regions, so that each digit appears exactly once in every row, column and region. All points where three lines meet are given. There are no points where four lines meet.

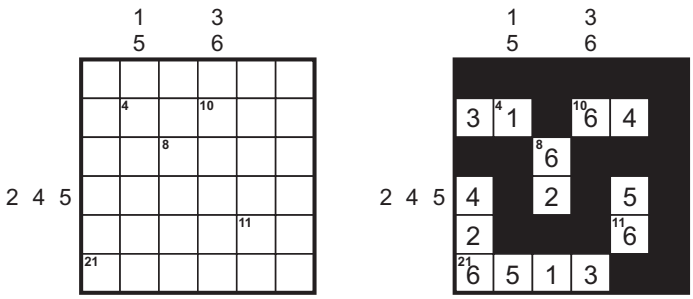


8. Sum Islands

1)The numbers in the diagram represent the sum of the cells in a region. Determine the regions and use digits 1-6 so that no digit is repeated within any row, column and region. All sums are given and are formed of at least two digits.

2) All regions should be separated from each other with a continuous wall, which cannot form any 2x2 areas and occupies every cell not used by the regions.

3) The digits outside the grid indicate the digits in the corresponding direction, in increasing order.



9. Diagramless Kakuro

Place the digits 1-6 (1-7 for the example) and some black squares into the grid to form a valid kakuro puzzle. The black squares in the grid have 180-degree rotational symmetry, all white squares are connected, and all digits belong to a sum of two or more numbers in both directions.

Clues given next to the grid indicate the sums that are formed in the grid. For the row clues, this means all clues in the first row (from left to right) are listed before clues in the second row, and so on. For the column clues, all sums that have their uppermost cell in the first row (from left to right) are listed before clues that have their uppermost cell in the second row, and so on.

Across :
8,6,7,21,7,7,10,11,
8,12,15,9,16,4

Down:
3,28,9,9,28,4,8,
8,9,14,11,10

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

10. Mr Universe

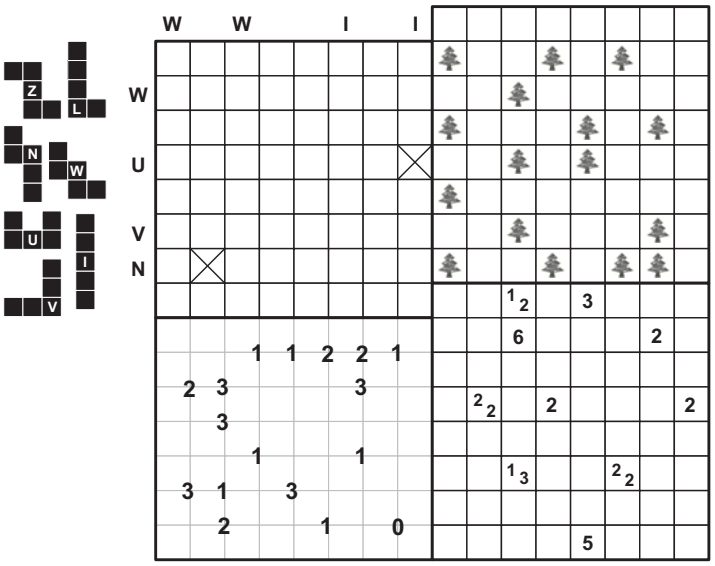
Locate a snake in the grid, that travels only horizontally and vertically, without touching itself even at a point. The snake travels along four grids, each of the grids belong to a different puzzle. The instructions for each grid are listed below. Every rule in the instructions is valid only for the cells of the corresponding grid. The head and tail of the snake may be anywhere in any grid.

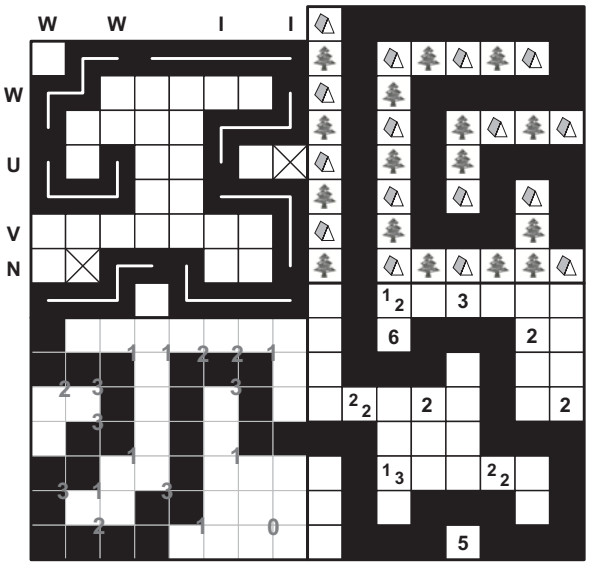
1 Obtain snake segments with linking all the given pentomino pieces. The letters outside the grid indicate the pentominoes that can be seen first in the corresponding row/ column. Pentominoes may be rotated and/ or mirrored. There are no pentomino pieces in crossed cells.

2 Every tree in the diagram has a tent, connected from the side. Tents connot touch each other even at a point. All cells which are not occupied by a tree or a tent are parts of the snake.

3 Blacken some cells to obtain snake segments. Numbers in the grid indicate the amount of blacken cells in their neighbouring squares.

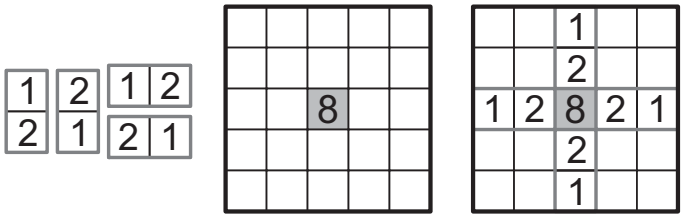
4 Paint some squares black to obtain snake segments. Numbers in a square indicate the length of black cell blocks on its neighbouring cells. If there is more than one numbers in a square, there must be at least one white cell between the black cell blocks.





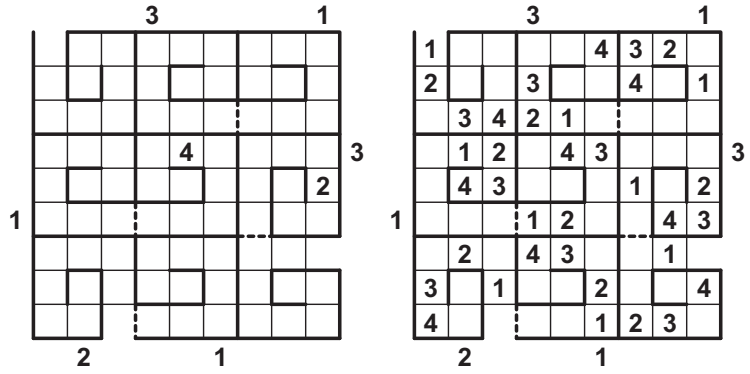
11. Briquet

Locate 12 blocks in the diagram, each having the size 1x3 (1x2 for the example), without touching each other from the side. These 12 blocks should contain all the possible combinations of the numbers 1,2 and 3 (1 and 2 for the example). Half of the blocks should be located horizontally and half should be located vertically. No combination can repeat in horizontally and vertically group of six blocks. Numbers in the diagram indicate the sum of the numbers touching their cell from the sides.



12. Snail Sudoku

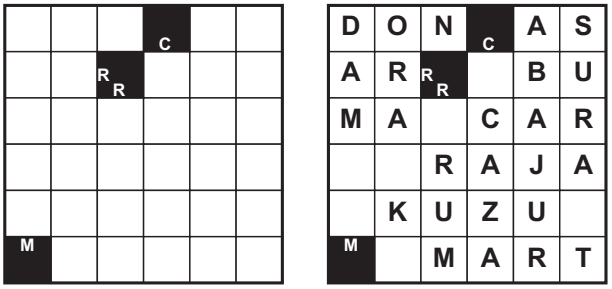
Fill the grid with digits 1~4, so that each digit appears exactly once in every row, column and every 3x3 spiral. Digits should be placed orderly in the spirals, from the entrance to the center. The numbers outside the grid indicate the first seen number from that direction.



13. Rehber

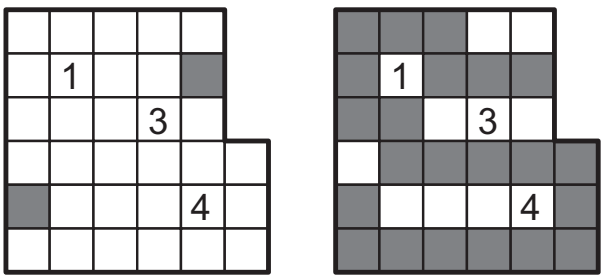
Locate all the given words in the grid, reading either from left to right or from top to bottom. There may be some empty cells between the letters. There cannot exist any word which is not on the list. Clues inside the diagram indicate the first visible letter in the corresponding direction.

AR,AS,BU
DAM,DON,RUM
CAZA,KUZU,MART,
ORAK,RAJA
MACAR,SURAT
ABAJUR



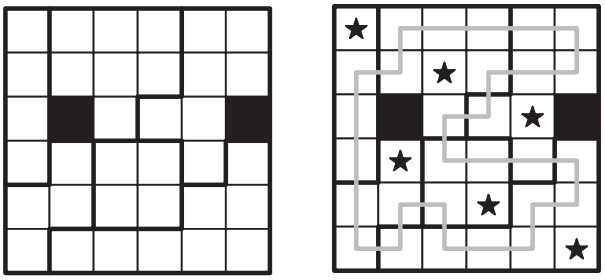
14. Snake Egg

Locate a snake in the grid, whose head and tail are given, that travels only horizontally and vertically, with touching itself only diagonally. The remaining cells should form seven separate areas (four for the example) with the sizes 1~7 each (1~4 for the example), and one more with an unknown size. Numbers in the grid indicate the size of the area including that cell.



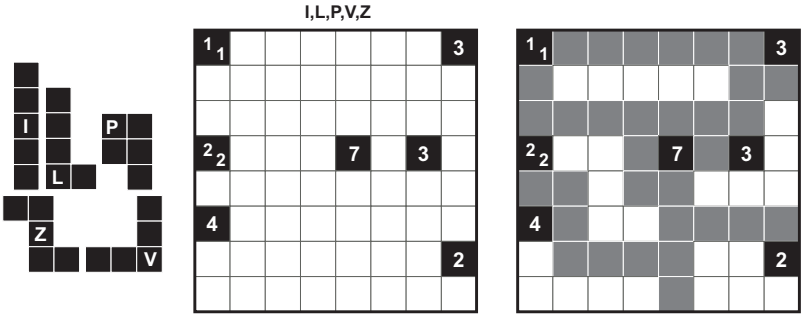
15. Comet

Place some stars in the grid so that there is exactly one star in every row, column and outlined region. Stars cannot touch each other, not even diagonally. Additionally, all remaining cells must be traversed by a single closed loop. There are no stars or loop segments on black cells.



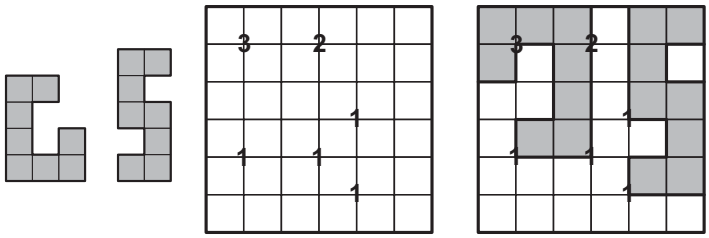
16. Tapa Pentopool

Paint some squares black to create a continuous wall. Number/s in a square indicate 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. Painted cells cannot form a 2x2 square or larger. Additionally, all unpainted cells should form given different pentominoes. The pentominoes may be rotated and/or mirrored, and cannot touch each other from the sides. There are no wall or pentomino segments on cells containing numbers.



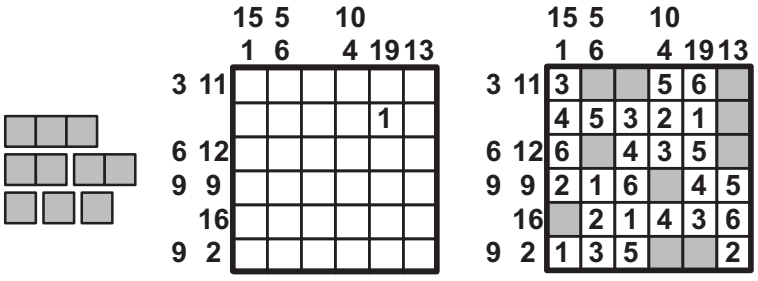
17. Tetroscope

Place the given tetrominoes in the diagram using each tetromino exactly once. Pieces can be rotated but not mirrored. Numbers inside the grid indicate the amount of occupied cells in the neighbouring squares. Tetrominoes cannot touch each other, not even diagonally.



18. Japanese Sums & Battleships

Fill the grid with numbers 1~6. Numbers outside the grid indicate the sums of the numbers in the corresponding directions, in order. There must be at least one blackened square between the sums, and numbers cannot be repeated within a row/column. Satisfy the sums so that all the blackened cells include the given Battleships fleet. The ships cannot touch each other even diagonally. Some sums and some numbers are already given.



The puzzle ideas are obtained as follows:

Tapa - ***OAPC Puzzle***

Psycho Killer - ***Mehmet Murat Sevim***

Tren - ***15th Japan Puzzle Championship***

Word Stairs - ***OAPC Puzzle***

The Persistence Of Memory - ***OAPC Puzzle***

Hamle - ***OAPC Puzzle***

Tripod Sudoku - ***OAPC Puzzle***

Sum Islands - ***OAPC Puzzle***

Diagramless Kakuro - ***Thomas Snyder***

Mr Universe - ***OAPC Puzzle***

Briquet - ***OAPC Puzzle***

Snail Sudoku - ***OAPC Puzzle***

Rehber - ***OAPC Puzzle***

Snake Egg - ***OAPC Puzzle***

Comet - ***OAPC Puzzle***

Tapa Pentopool - ***OAPC Puzzle***

Tetroscope - ***OAPC Puzzle***

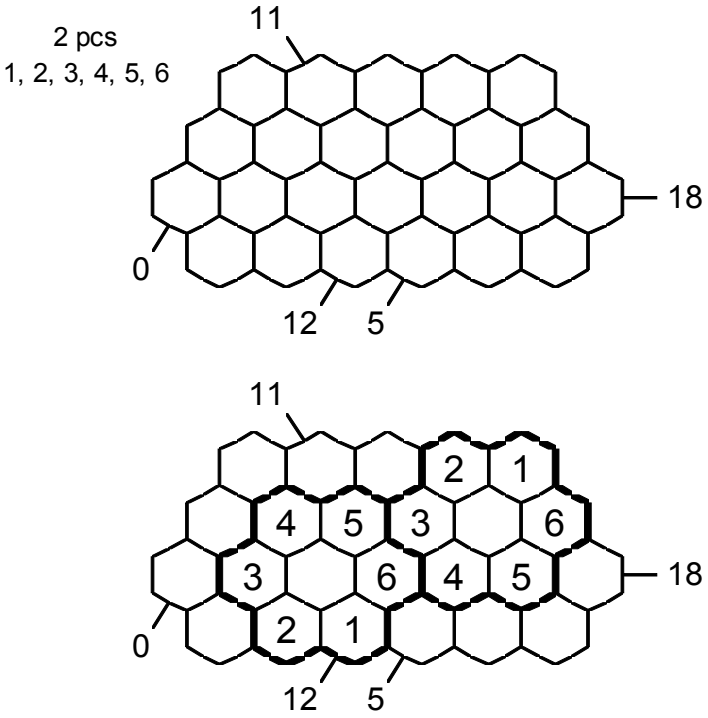
Japanese Sums & Battleships - ***OAPC Puzzle***

Puzzles test-solved by Thomas SNYDER

Number petal

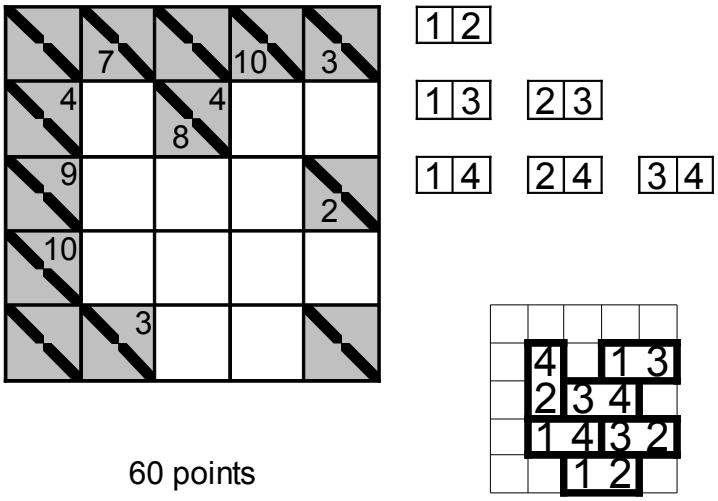
Place the given number of flowers (ring of 6 hexa items) into the grid and write numbers onto it's petals. Flowers may touch each other, numbers must follow each other in the given order (clockwise or anti-clockwise), they are not repeated in a row/diagonal. Numbers alongside the grid show the sum of numbers in that row/diagonal.

20+30+30 points



DominoKakuro

Place the given domino set into the grid covering the empty cells, so that they do not overlap each other. Given numbers indicate the sum of the "number word" starting from that definition cell to the right / down. No digit is ever repeated in a "word".



60 points

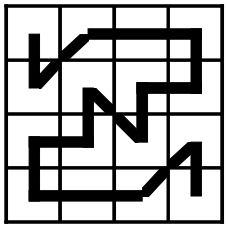
Password find

Find a path from the top left corner to the bottom right corner. The path can travel horizontally, vertically or diagonally and it passes through all squares but never crosses itself. Reading the letters in the order they are visited gives repetition of the letters of the given password.

30+40 points

CITY

C	T	Y	C
I	C	T	I
T	I	Y	T
Y	C	I	Y



Queen's park

Place 5 chess queens into the grid's empty squares (only one queen per cell is allowed), so that the given numbers indicate the number of directions from where that cell is attacked by a queen. A cell is attacked by any queen in the same row/column/diagonal.

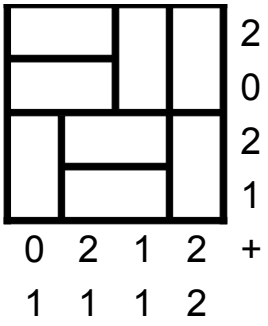
25+25+25 points

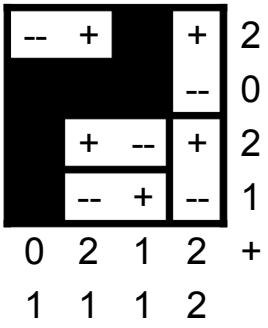
Magnets

The diagram contains magnetic and non–magnetic plates of size 2x1. Each magnetic plate has a positive (+) and a negative (–) part (pole). Poles with the same charge cannot border on any side as they repel each other. However, their corners can touch. Non–magnetic plates can be placed next to any other plates, magnetic and non–magnetic ones each. The non–magnetic plates should be blackened.

The numbers of + and – charges for rows and columns are indicated. Mark the position of all plates.

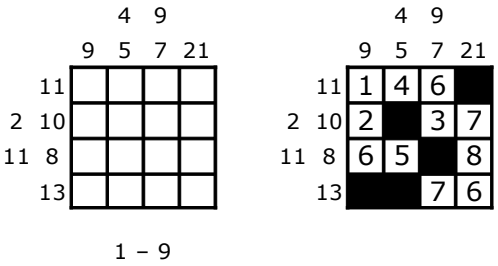
40+40 points





Japanese Sums

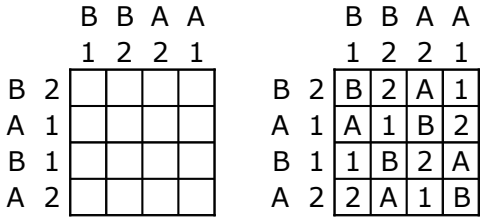
Enter numbers into the grid from the given range (one per cell), not repeating any of them in a row or column. Grid also contains black cells, separating the "number words". Numbers at the top and left side indicate in order the sum of numbers in the words in that row / column.



30+60 points

Double ABC

Place the given set of numbers and letters into the grid:
- every number/letter appear exactly once in every row/column (some cell may remain empty),
- numbers/letters alongside the grid show the nearest number/letter from that direction.



30+40 points

Paint by numbers – pentomino

Paint some cells black, so that the numbers alongside the grid show the black blocks' length in that row/column in order. There must be a white cell between two black blocks.
At the end black blocks form the full set of pentominoes which don't touch each other, not even diagonally. Pentominoesd are given for your help, they may be rotated and reflected.

50 points

ABCDE Division

Divide the grid into congruent pieces of 5 squares, so that every piece contain each letter exactly once.

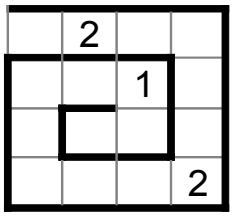
A	A	D	E	C
C	B	B	D	C
E	D	A	B	E

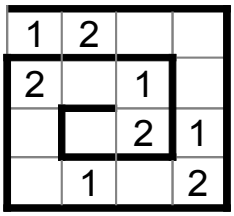
A	A	D	E	C
C	B	B	D	C
E	D	A	B	E

45 points

Magic Snail

Create a magic square with numbers 1-2-3 (each number appear exactly once in every row/column), so that the numbers follow each other in 1-2-3-1-2-3-...-1-2-3 order along the path from outside towards the center.

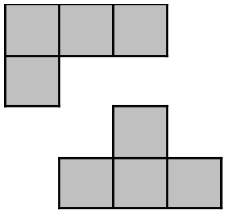


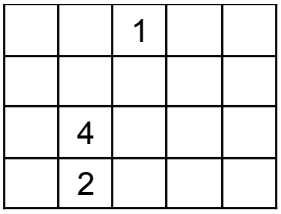


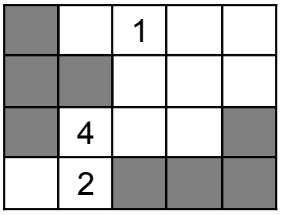
20+30+30 points

Minesweeper – tetris

Place the given set of tetris elements into the grid in minesweeper style: numbers show that how many of the neighbouring cells are occupied by a tetris piece. Tetris items do not touch each other, not even diagonally.



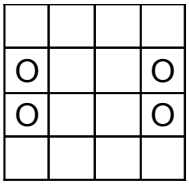


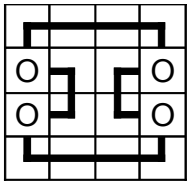


30+40 points

Every 3rd turn

Draw a single closed loop that passes through each square exactly once and never crosses or overlaps itself. The path travels horizontally or vertically, never diagonally. Along the loop every third square where the loop makes a turn is marked with a circle.

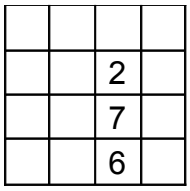


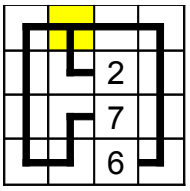


30+50 points

Find the center

Find the center of the field, then connect every number to it with a line exactly the same length as the number itself. Line segments connect the center of the squares and go horizontally or vertically. Lines do not cross or overlap each other. Black squares do not contain any line segments.

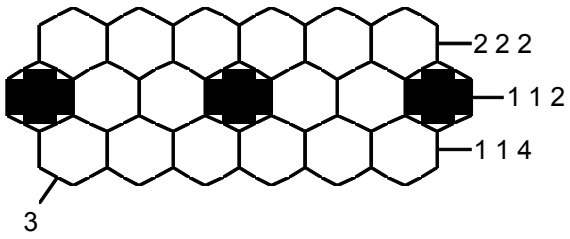




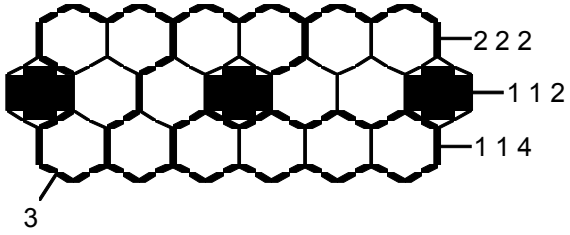
20+20+20 points

All fours

Divide the grid into adjacent blocks of four hexa cells. Numbers show the length of blocks in the corresponding rows and diagonals, but not necessarily in the correct order. Black cells are not part of any block.



25+25+40 points



10th 24 HOURS PUZZLE CHAMPIONSHIP

04-06. SEPTEMBER 2009.
HOTEL BENTA
BUDAPEST

PUZZLES BY:
NIKOLA ZIVANOVIC & MILOVAN KOVACEVIC
(SERBIA)

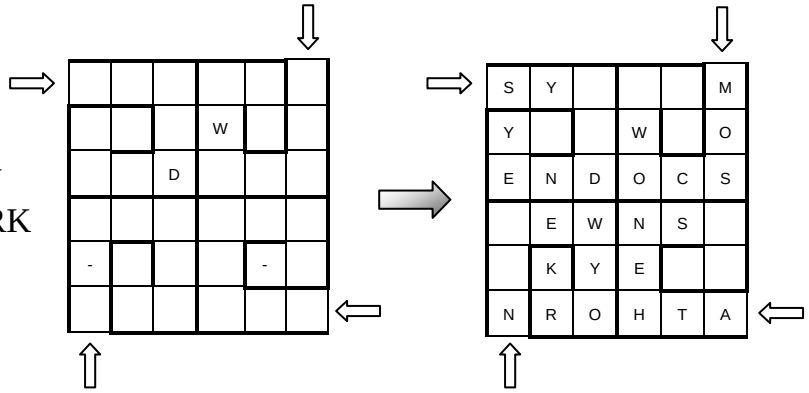
INSTRUCTION BOOKLET

FOUR SNAILS	105 (30+35+40)
TOROIDAL BATTLESHIPS	80 (40+40)
SIMPLE MATH	40 (10+30)
SUDOKU MULTIPLICATION TABLE	75
LOGIC PYRAMID II	55 (10+45)
ARROW SNAKE	120 (35+45+40)
MAGNETIC SCRABBLE	75
FILLOMINO SKYSCRAPERS	125 (30+45+50)
EASY AS ABCD	50 (10+10+30)
TENTS	50 (15+35)
PEN-TWO-MINO	60
THERMOMETERS	30
DECRYPTING	60
HEXAGON CODE	75
total	1000 points

1. FOUR SNAILS (30+35+40)

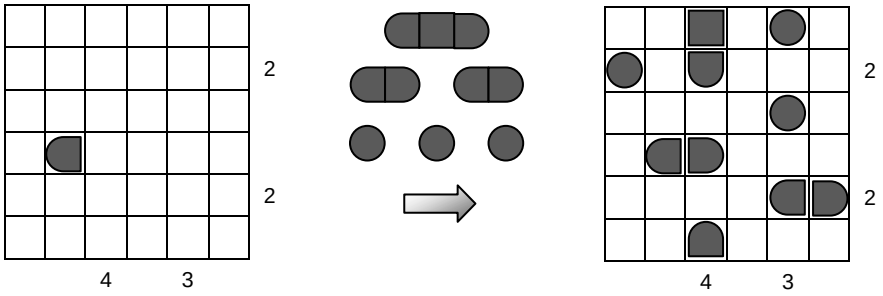
Write the given words along the snails, in the order from outside towards the middle. The same letter can not appear more than once in each row and column. Sign „-„ means there is no letter in cell. Some letters are already given.

ATHENS
MOSCOW
NEW YORK
SYDNEY



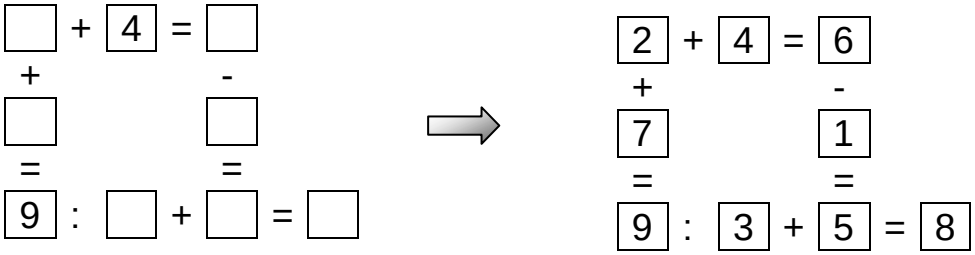
2. TOROIDAL BATTLESHIPS (40+40)

Locate the position of the standard fleet (mini fleet in the example) to the grid. The ships do not touch each other, not even diagonally. The numbers outside the grid indicate how many cells in that row or column contain parts of ships. The grid is joined at the outermost columns and rows as if it were a toroidal grid.



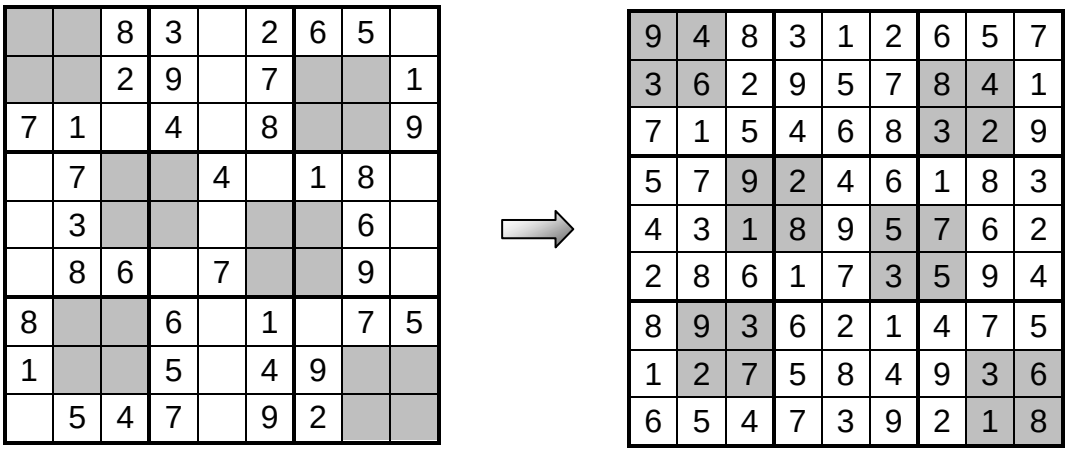
3. SIMPLE MATH (10+30)

Fill in the empty cells with numbers from 1 to 9 such that the results of the operations be correct. Each number should be used only once.



4. SUDOKU MULTIPLICATION TABLE (75)

Fill in the grid so that every row, column and 3x3 box contains all different digits from 1 to 9. In the grey areas the lower row must contain the product of the digits in the upper row.

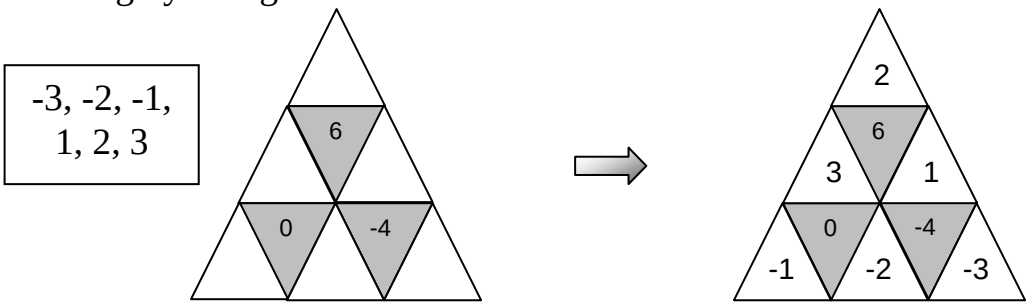


		8	3		2	6	5	
		2	9		7			1
7	1		4		8			9
	7			4		1	8	
	3						6	
	8	6		7			9	
8			6		1		7	5
1			5		4	9		
	5	4	7		9	2		

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

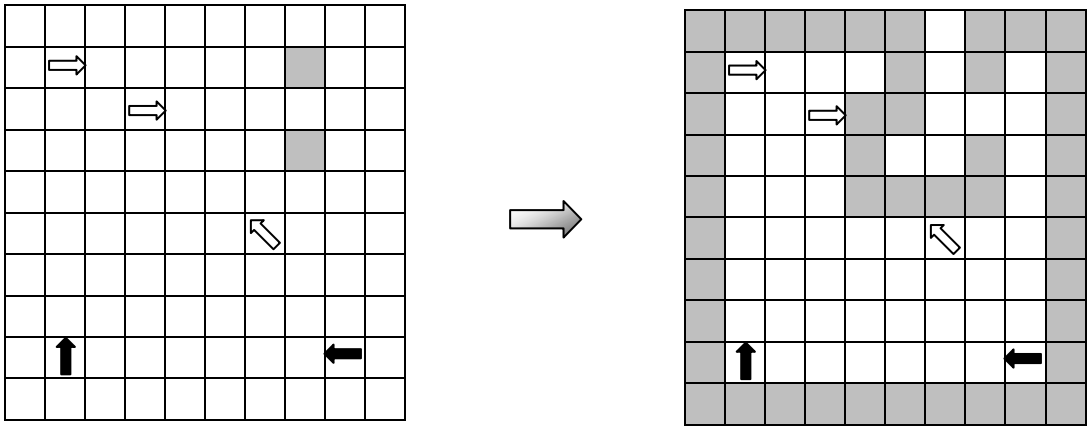
5. LOGIC PYRAMID II (10+45)

Place the numbers next to the grids into the white triangles, once each, so that the sum of any three numbers surrounding a grey triangle equals to the number written into the grey triangle.



6. ARROW SNAKE (35+45+40)

Draw a snake into the diagram, 45 cells long, not touching itself even diagonally. Each white arrow points exactly three parts of snake body, while each black arrow points exactly one part of snake body. The head and tail of snake are already given (grey cells). The snake cannot cross through the cell with arrow.



7. MAGNETIC SCRABBLE (75)

Find some dominoes in the grid, each having a size of 1x2 and halves polarised as +/-. Domino halves with the same polarisation cannot touch each other horizontally or vertically (diagonal touch between them is possible). Numbers outside the grid indicate the number of halves polarised each way in the given row/column. Then write a letter into each cell without a domino, these letters should form a regular and connected Scrabble. The words of the Scrabble, as well as some letters in the grid, are given.

FOUR
FIVE
SIX
SEVEN
NINE
TEN

	-					1	1
	+				+	3	2
					-	0	1
		E				1	2
				N		2	2
						2	1
2	2	1	2	0	2	+	
1	3	1	1	1	2		-

+	-	F	O	U	R	1	1
-	+	I	+	-	+	3	2
S	E	V	E	N	-	0	1
I	-	E	-	I	+	1	2
X	+	-	+	N	-	2	2
+	-	+	T	E	N	2	1
2	2	1	2	0	2	+	
1	3	1	1	1	2		-

8. FILLOMINO SKYSCRAPERS (30+45+50)

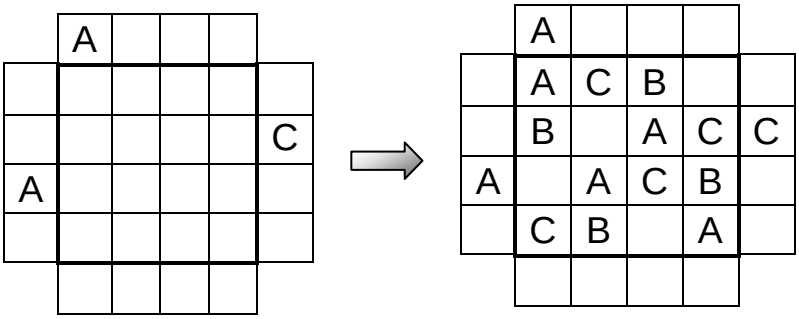
Write a number into each square of the grid. Fields with same numbers must form horizontal and vertically connected ranges, which consist of as many fields as the number indicates. Two different, horizontal or vertically adjacent ranges may not have the same size. The numbers outside the grid indicate how many buildings are visible from that direction.

	6					
						7
	2					2
3				1		
	7					

	6					
	1	7	7	7	7	7
	2	2	7	7	2	2
3	3	3	3	1	7	9
	4	4	4	4	7	9
	7	7	7	7	7	9
	9	9	9	9	9	9

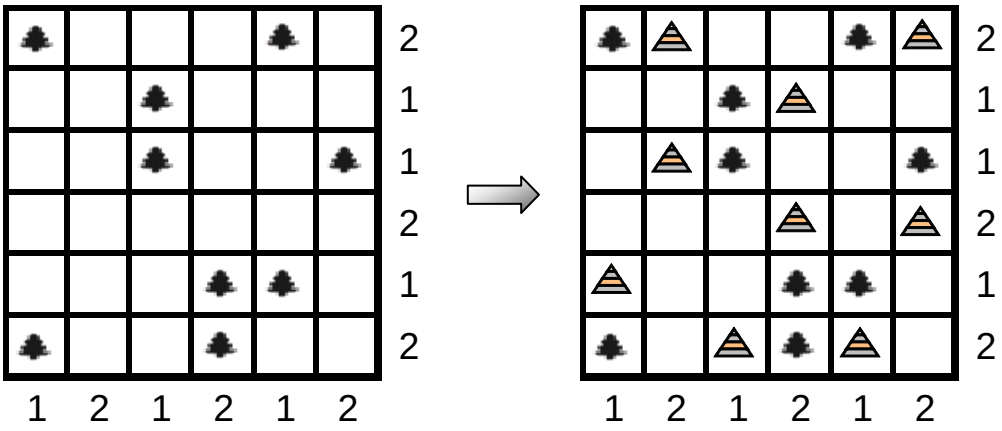
9. EASY AS ABCD (10+10+30)

Write a letter into some of the fields. In each line and column letters A, B, C and D (in example A, B and C) must occur exactly once and some fields remain empty. The letters outside the grid appear first in that row or column.



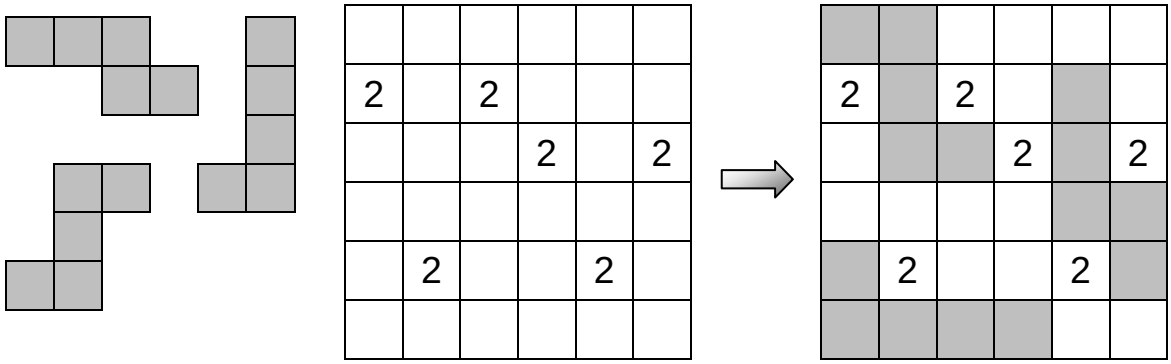
10. TENTS (15+35)

The diagram represents the map of a camp. The numbers at the right and bottom margin indicate how many tents are located in the respective line and/or column. Each tent is horizontally or vertically neighbouring to a tree, while each tent is assigned to exactly one tree. Tents can not touch each other, not even diagonally.



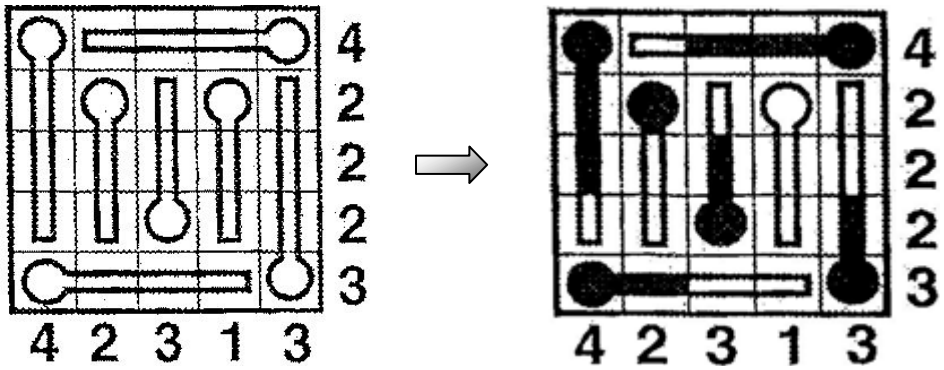
11. PEN-TWO-MINO (60)

Place complete pentomino set (only 3 elements in the example) into the grid. Pieces can be rotated and/or reflected, but elements can not touch each other, not even diagonally. Numbers in the grid show the number of horizontally and vertically neighbouring cells used by pentomino. All numbers 2 in the grid are given. Pentominoes can not appear in the cells with number.



12. THERMOMETERS (30)

Determine the level of mercury in each thermometer, bearing in mind that the numbers outside the grid correspond to the number of filled cells in the given direction. The mercury in thermometers is filled from the bulb.



13. DECRYPTING (60)

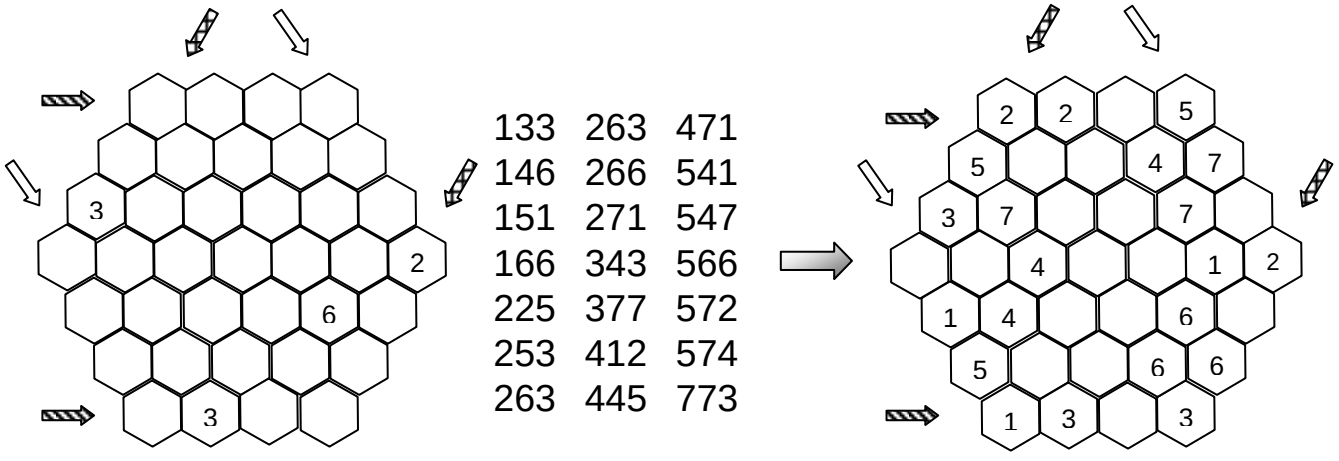
Replace the given letters with numbers from 0 to 9 such that the results of the operations are correct. The same letter should always be replaced by same number.

HU+NG=ARY
BExN=TA
H+R=G+A

H	U	N	G	A	R	Y	B	E	T
6	9	3	5	1	0	4	2	7	8

14. HEXAGON CODE (75)

Place three sets of numbers from 1 to 7 in the hexagon so that exactly 3 numbers appear in all the 21 possible directions (7 rows, 14 diagonals). Values next to the hexagon show the three-digit numbers that thus appear in the hexagon read in the directions showd by the arrows.



10TH 24HOURS PUZZLE CHAMPIONSHIP

Puzzles by Olga Leontieva

INSTRUCTIONS

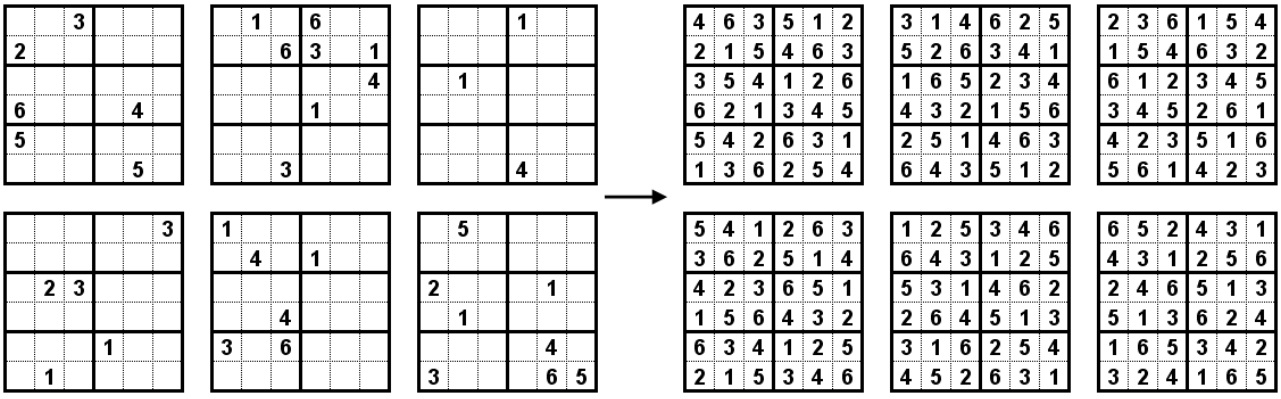
LIST OF PUZZLES

1	**SUDOKU SEXTET**	**200**	100+20+20+20+20+20
2	**BUTTONS**	**40**	20+20
3	**CHAOS**	**90**	40+50
4	**SUDOKU WITH HOLES**	**60**	
5	**KNIGHT MOVEMENT**	**180**	90+90
6	**TRIANGLES**	**40**	20+20
7	**DOMINESWEEPER**	**60**	
8	**LOOP**	**70**	20+50
9	**PENTAMINO**	**60**	30+30
10	**MATHEMATICAL EXPRESSIONS**	**80**	40+40
11	**AREAS**	**50**	20+30
12	**XO**	**70**	30+40
TOTAL		**1000**	

Puzzle 1. Sudoku sextet

Solve six sudoku 6x6 by main rules. Additional condition is: In each cell position (for example, in the top right corner of the grid) all 6 digits from different sudoku grids cannot repeat.

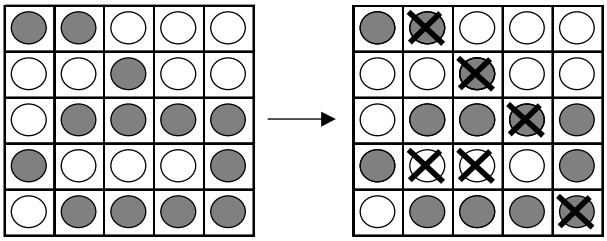
EXAMPLE:



Puzzle 2. Buttons

Pressing any button switches its color and colors of all neighbors (through the side of a cell).
Press exactly SIX buttons to make all buttons white.

EXAMPLE:



Puzzle 3. Chaos

Fill in the grid with letters A, B, C, D. There cannot be three identical letters successively (vertically, horizontally or diagonally), and also cannot be two identical letters connected by a knight move.

EXAMPLE:

D	A	A	C	C
	B			D
C	B			
C			A	

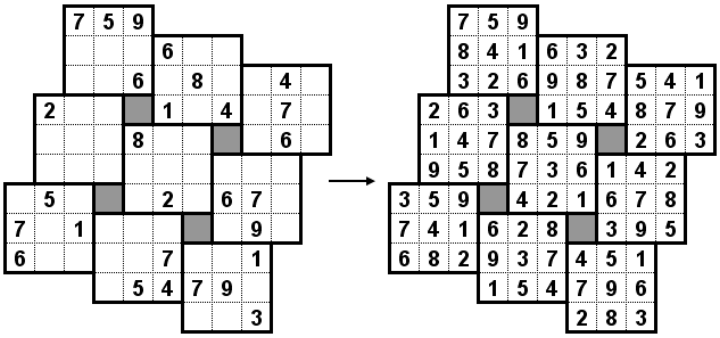
→

D	A	A	C	C
D	B	B	D	D
C	B	B	D	D
C	C	A	A	C

Puzzle 4. Sudoku with holes.

Fill in the grid with digits 1-9 so that in each column, each row and each marked 3x3 square the digits cannot repeat.

EXAMPLE:



Puzzle 5. Knight movement

Restore a way of a chess knight through all 64 cells, starting with 1. Knight cannot visit any cell twice. Write the move's numbers into the cells.

EXAMPLE:

				14			
		15	28		36	1	6
30				8		38	
	20					5	
		52	21		61		
55				23	42		44
64			53				
			24				

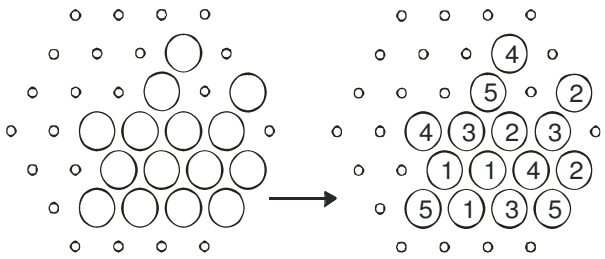
→

16	29	18	9	14	7	34	37
19	12	15	28	33	36	1	6
30	17	10	13	8	3	38	35
11	20	27	32	51	22	5	2
26	31	52	21	4	61	50	39
55	58	63	60	23	42	47	44
64	25	56	53	62	45	40	49
57	54	59	24	41	48	43	46

Puzzle 6. Triangles

Place the digits from 1 up to 5 (6) into the circles. Each digit is used exactly three times. Identical digits should form equilateral triangles. The lengths of the sides of triangles should increase in order: the triangle with 1 is the smallest one, and the triangle with 5(6) - the biggest.

EXAMPLE:



Puzzle 7. Dominesweeper

Locate a set of dominoes (from 1 to 6 without doubles) in the grid. Dominoes cannot touch each other, not even diagonally. Digits on the domino halves cannot repeat in any row or column. The given numbers indicate the sum of numbers written into the neighbouring domino halves (diagonal neighbours included). No number may be covered by a domino.

EXAMPLE:

	14			14		11		
		10	10			14	8	8
6	13		12		12			
	14					5	10	10
		6		17	17			
12		4	6				10	10
		6		13	15			
	11							
		11		8	6		9	3

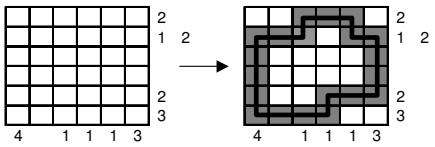
→

6	14	4	5	14	3	11	2	1
4		10	10		6	14	8	8
6	13	1	12		12		3	2
2	14	6		5	1	5	10	10
5		6		17	17		1	4
12		4	6	6	5		10	10
3	4	6		13	15			5
	11		2			4		3
1	3	11	4	8	6	2	9	3

Puzzle 8. Loop

Draw a simple closed loop in the grid connecting centers of cells horizontally or vertically. Loop cannot touch or cross itself. Numbers outside the grid show lengths of all segments of a loop in corresponding row or column. If there are two or more numbers in the line, their order can differ from the order of the segments in line.

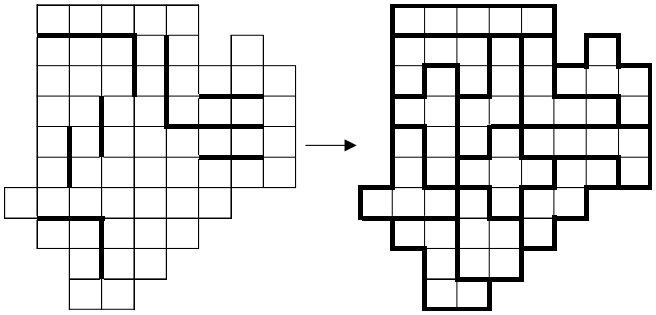
EXAMPLE:



Puzzle 9. Pentamino

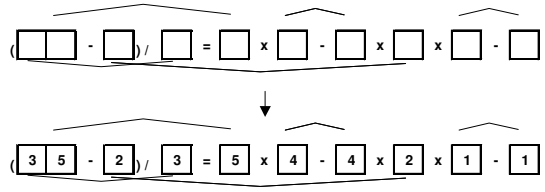
Divide the grid into the complete set of pentaminoes. The elements can be rotated or reflected. Any straight lines of length 2 or more that separate exactly two pentaminoes have been marked.

EXAMPLE:



Puzzle 10. Mathematical expressions Place two full sets of digits 1-5 into the cells so that true mathematical expressions appear. The identical digits are connected.

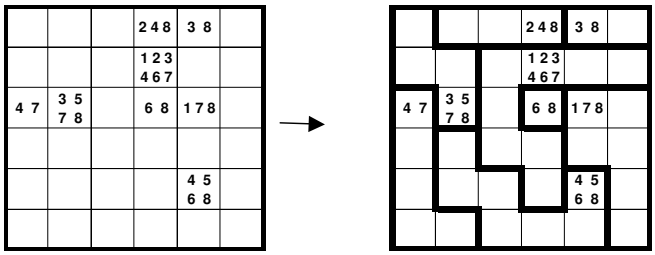
EXAMPLE:



Puzzle 11. Areas

Divide the 6x6 grid into eight parts of size 1, 2, 3, 4, 5, 6, 7, 8. One cell of each part contains digits which show areas of all neighbouring parts.

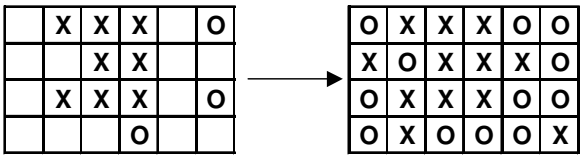
EXAMPLE:



Puzzle 12. XO

Fill in the grid with O's and X's so that four consecutive identical letters in a row, column or diagonal never occur.

EXAMPLE:



Instruction Booklet

László Osvalt

10th 24-hour puzzle championship, 2009

Find the Differences	36 points*
10th 24-hour puzzle championship	34 points
Skyscrapers & Areas	35 points (15+20)
Amorphous Sudoku	70 points (20+50)
Magic Poker	80 points
ABC-Connection	35 points (10+25)
ABC-Pathfinder	45 points (20+25)
Battleship Sudoku	75 points* (20+55)
Penta-dissection	80 points (35+45)
Japanese sums	135 points (45+90)
Sea Serpent	35 points (10+25)
Snake	50 points (20+30)
Word Mastermind	45 points (15+30)
Frame game (crossword)	50 points
Easy as ABC Diagonally	45 points (15+30)
2/5 Pentomino – Twins	50 points*
Gardens (Nurikabe)	45 points (15+30)
Paint It Black	55 points*
Total	**1000 points**

* partial scores are available
*(partial solution must always be part of a **consistent full solution**)*

FIND THE DIFFERENCES — 36 POINTS*

(3–3 POINTS FOR THE FIRST 4 DIFFERENCES; 4–4 POINTS FOR EACH FURTHER DIFFERENCE)

At first sight the two pictures seem to be identical, but in truth there are 10 differences between them. Find these differences. ***Please!*** *Mark the differences by* circles *or* rectangles *no bigger than the given one. More than 10 differences marked: 0 points. More than 2 erroneous marks: 0 points.*

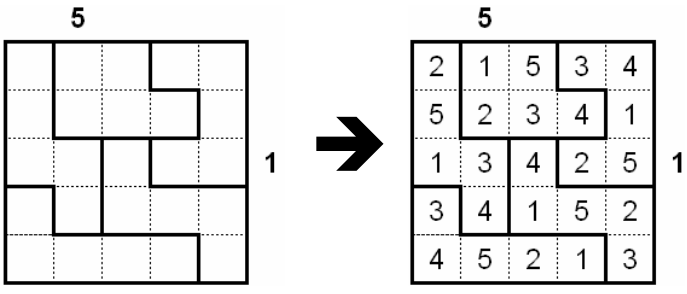
10TH 24 HOURS PUZZLE CHAMPIONSHIP — 34 POINTS

There is some logical relationship among the following numbers. Which number fits in the place of the question mark?

SKYSCRAPERS & AREAS — 35 POINTS (15 + 20)

The diagram shows a housing estate, with houses in each street (that is, row and column) of different heights (1–5 in the smaller diagram, 1–6 in the greater). The numbers beside show how many houses may be seen from that end of the appropriate row or column (higher houses cover lower ones). The whole area is divided into amorphous parts; each such part must also contain houses of different heights.

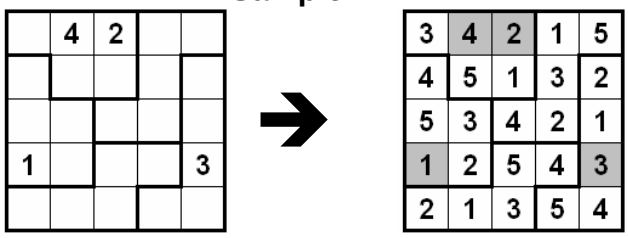
Sample:



AMORPHOUS SUDOKU — 70 POINTS (20 + 50)

Write numbers between 1 and 6 (1 and 7 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: 1–5.)

Sample:

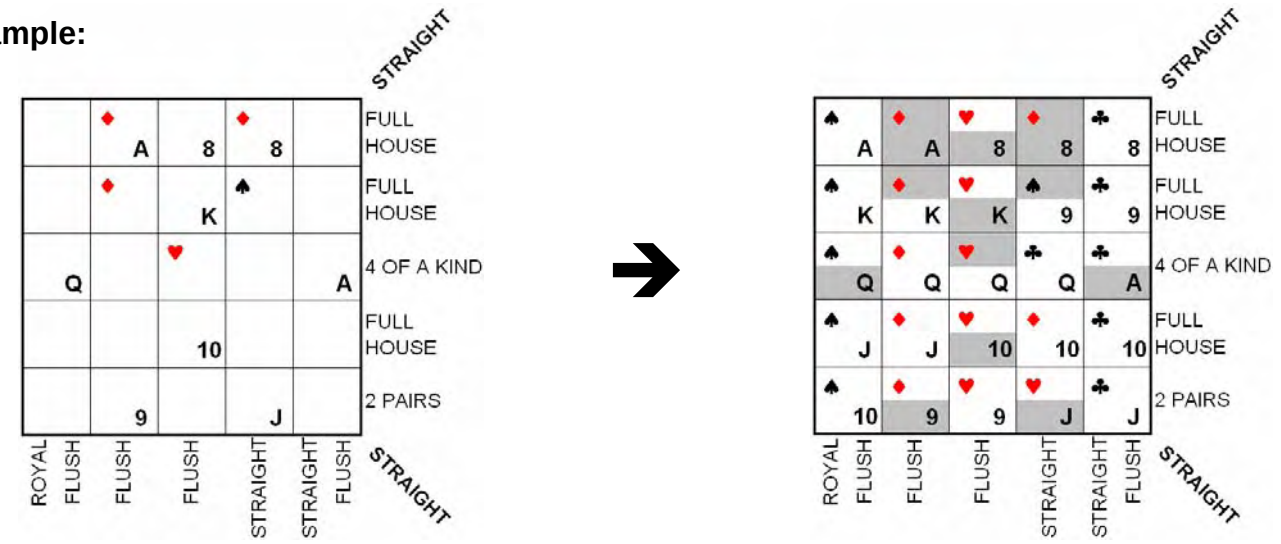


MAGIC POKER — 80 POINTS

Place 25 cards of the given 28 ones (ranks between 8–A) into the figure, to get the poker hands shown in each row, column and the two longest diagonals. Some card ranks and suit marks are already given. For your assistance, the hand rankings are the following:

ROYAL FLUSH	A, K, Q, J, 10 in one suit.
STRAIGHT FLUSH	5 consequent cards from rank list A, 8, 9, 10, J, Q, K – in one suit.
4 OF A KIND	4 matching cards of same rank with a different 5th – e.g. K, K, K, K, 9.
FULL HOUSE	3 matching cards of one rank + 2 matching cards of another, e.g. Q, Q, Q, 8, 8.
FLUSH	5 cards of a same suit, not in rank sequence, e.g. ♣A, ♣K, ♣J, ♣10, ♣8.
STRAIGHT	5 consequent cards from rank list A, 8, 9, 10, J, Q, K, A, but in more than one suit, e.g. ♦K, ♦Q, ♦J, ♠10, ♦9.
3 OF A KIND	3 matching cards of one rank + 2 unmatching cards, eg. 10, 10, 10, K, Q.
2 PAIR	2+2 matching cards of one rank (but not all 4 matching), plus one unmatching card, e.g. A, A, Q, Q, 8.
1 PAIR	2 matching cards of one rank + 3 unmatching cards, e.g. J, J, A, 9, 8.
HIGH CARD	None of the above.

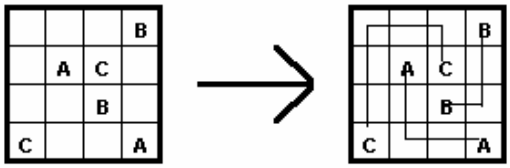
Sample:



ABC-CONNECTION — 35 POINTS (10 + 25)

Connect the identical letters with lines that consist of only horizontal and vertical fragments that connect the centers of adjacent unit squares.

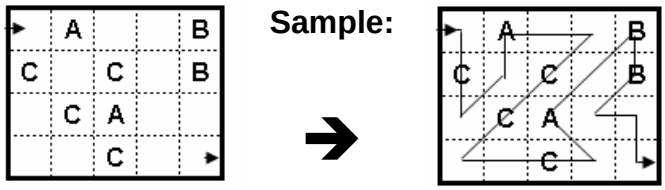
Sample:



ABC-PATHFINDER — 45 POINTS (20 + 25)

Draw a continuous line into the diagram between the given starting and ending fields, 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 straight.

Sample:

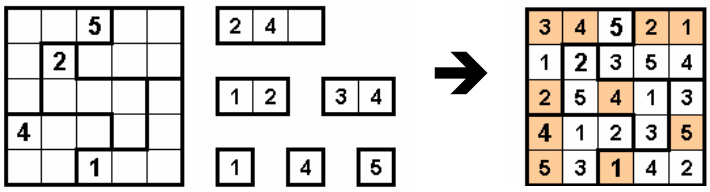


BATTLESHIP SUDOKU — 75 POINTS* (20 + 55)

PARTIAL SCORE: SOLVING ONLY THE SUDOKU PART: 10 / 25 POINTS, RESPECTIVELY.

In this combined puzzle, you have two tasks: 1) solve the given regular or amorphous Sudoku puzzle, 2) place the given battleship fleet into the Sudoku diagram in such a way that the numbers written into the ship units must cover the same Sudoku numbers. Ships may be rotated, but the sequence of their numbers cannot be changed (e.g. “256” may also be placed reversed as “652”, but other changes like “562” are not allowed.) Ship units without numbers may cover any number, but cannot loll out of the diagram. The ships cannot touch, not even diagonally.

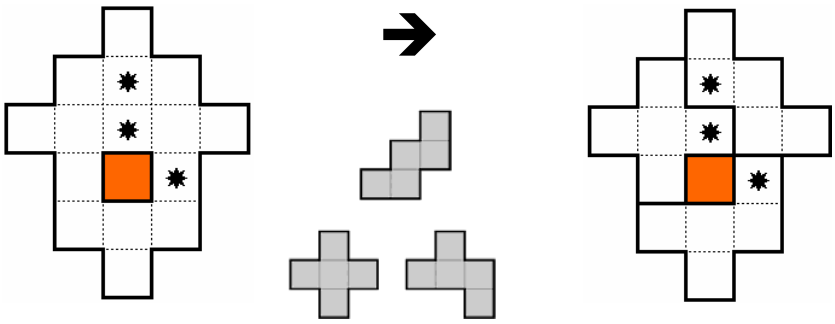
Sample:



PENTA-DISSECTION — 80 POINTS (35 + 45)

Divide the figures into the given pentomino elements. Each element must occur in the figure exactly once. One square of each element is marked by an asterisk. The elements may be reflected and rotated. Some borderlines between the elements may be given in advance. The shaded squares are not part of any element.

Sample:

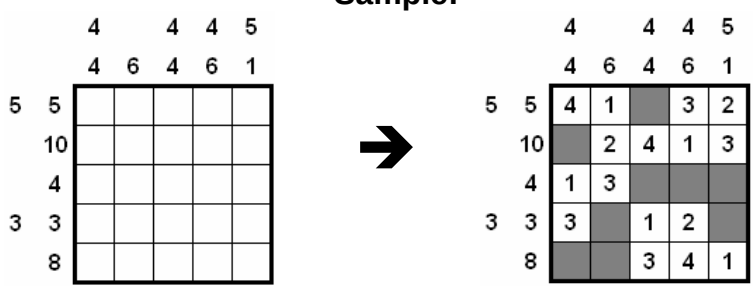


JAPANESE SUMS — 135 POINTS (45 + 90)

Place different numbers 1–7 (1–8 in second diagram) on each row and column. The numbers outside the grid indicate the sums of the figures in order. The sums are separated by at least one black square.

Sample: range 1–4

Sample:

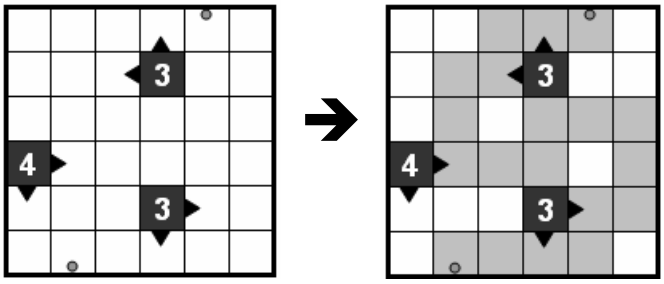


SEA SERPENT

35 POINTS (10 + 25)

A serpent hiding in the grid. Its head and tail are given, 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 given numbers show the total number of the fields where the serpent is present, but only towards the directions marked by arrows. The serpent does not pass through the numbers. Find the serpent and draw it into the diagram.

Sample:

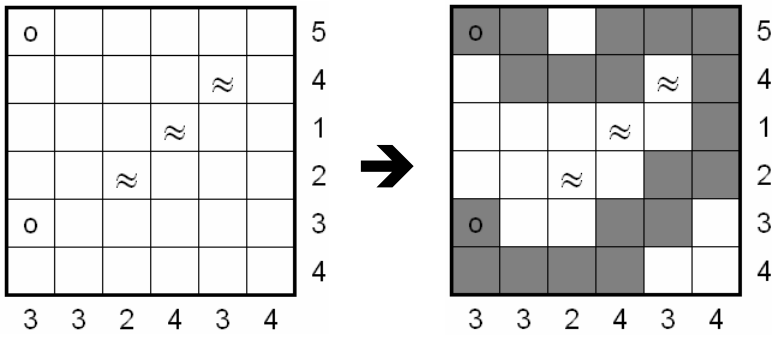


SNAKE

50 POINTS (20 + 30)

A 45 square long snake is hiding in the grid. Its head and tail are given. The numbers outside the grid indicate the number of the squares occupied by the snake's body in the correspondent row or column. The body of the snake cannot touch itself, not even diagonally. Fields marked by **"≈"** mark must remain empty.

Sample:

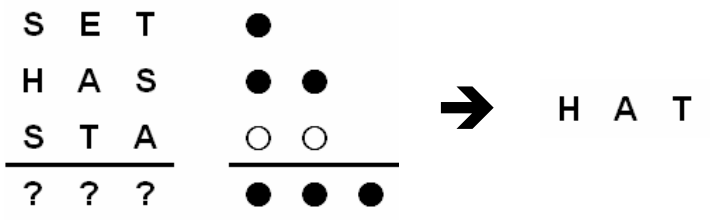


WORD MASTERMIND

45 POINTS (15 + 30)

A paper-and-pencil version of the classical Mastermind game. The colors have been substituted by letters. The number of black dots shows the number of letters being on the correct position, and the number of white dots shows how many more letters are in the guess, that are of the correct color but not at the correct position. The correct solutions form existing words in the designated language.

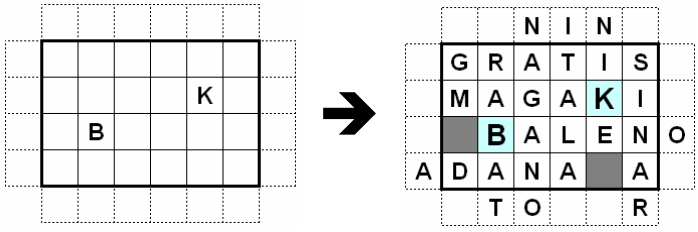
Sample:



FRAME GAME (CROSSWORD)

50 POINTS

Fill the diagram with the given words and place 7 black squares. But beware: some words may hang out of the diagram, its first or last (or both) letters must be written into the dotted-lined frame. Reading these letters clockwise starting from the left-upper corner give a famous rock band's name. All letters U are given in advance.



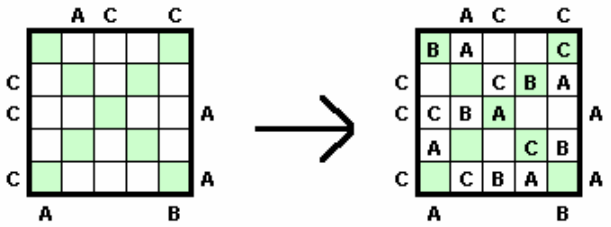
ADANA, BALENO, GM, GRATIS, ITALA, MAGAKI, NAGANO, NIKE, RABAT, SINAR

(In the sample, the solution – NINO ROTA – *is the name of a famous Italian composer, and B and K are the given letters.)*

EASY AS ABC DIAGONALLY — 45 POINTS (15 + 30)

Write 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:

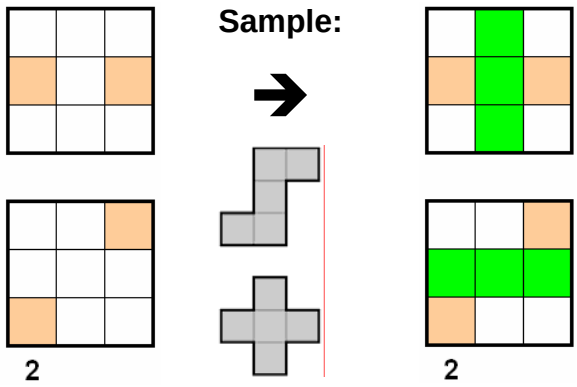


2/5 PENTOMINO – TWINS — 50* POINTS

PARTIAL SCORE: SOLVING ONLY ONE OF THE TWINS: 25 POINTS.

Place the given pentomino pieces into **one of the two diagrams** so that each piece gets placed exactly once. The pieces do not touch anywhere, not even diagonally. The numbers outside the grid show the number of squares with pentomino parts in the corresponding row or column. The pieces may be rotated and mirrored at will. 2 squares of each piece are given in advance.

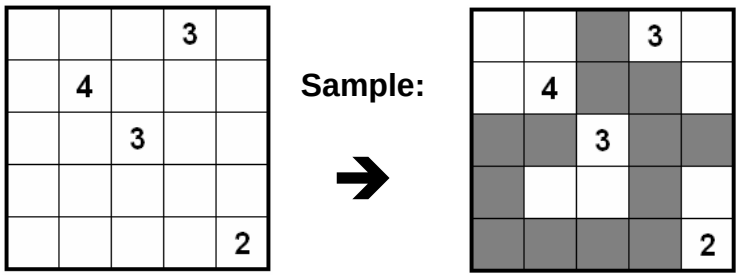
Sample:



GARDENS (NURIKABE) — 45 POINTS (15+30)

The numbers show one square of places of continuous white areas (gardens) containing as many squares as their number show. Gardens are separated by an interconnected fence (black squares); that means that there must be a way on side-by-side connected black squares between of its any two squares. The fence cannot contain 2x2 (or greater) black square. The gardens may not touch, at most diagonally. Draw the fence in.

Sample:

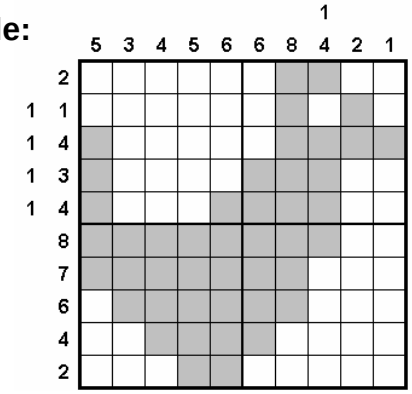


PAINT IT BLACK — 55 POINTS*

(25 POINTS IN CASE OF 1 OR 2 ERRONEOUS FIELDS)

The numbers on the left of each row and the top of each column tell how many continuous groups of black squares there are in that line, and, in order, how many consecutive black squares are in each group. Between two groups of black squares there is at least one, but maybe more white square. The rows may optionally also start or end by some white squares. In case of correct solution, a picture emerges in the figure.

Sample:



NAME:	POINTS:

10TH 24 HOURS PUZZLE CHAMPIONSHIP

INSTRUCTION BOOKLET

04-06 SEPTEMBER 2009
BUDAPEST
PUZZLES BY:

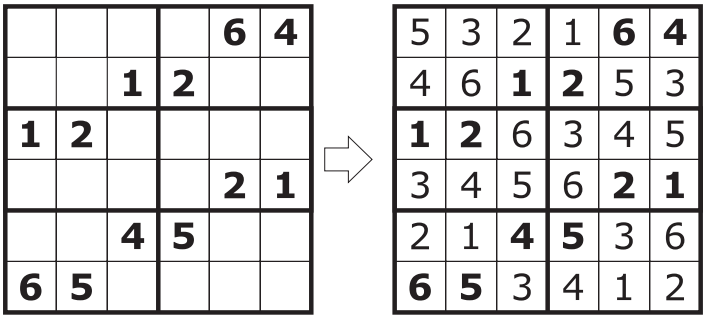
ANDREY BOGDANOV
RIAD KHANMAGOMEDOV

Sudoku	40 points
False Skyscrapers	95 points (35 + 60)
Puzzleman	50 points
Sudoku Builder	90 points (40 + 50)
Encrypted Tents	85 points (50 + 35)
Triangles	40 points (20 + 20)
Loop+Arrows	65 points (10 + 55)
Dominosweeper	130 points (60 + 70)
Snake	35 points
Build a Maze	85 points (55 + 30)
Trid	80 points (45 + 35)
Penta-Gluing	35 points
Symmetric Fence	55 points (25 + 30)
3x3 Patience	115 points (55 + 60)
Total	**1000 points**

SUDOKU

40 POINTS

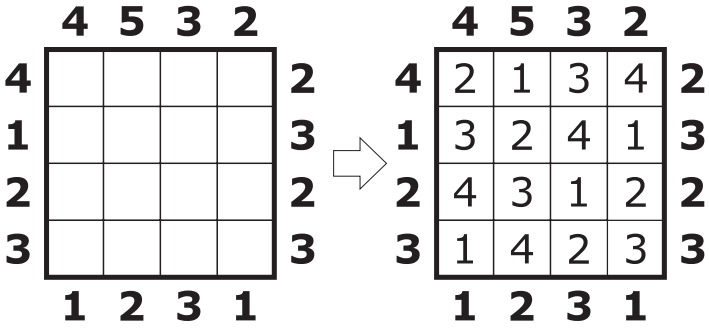
Fill in the grid with digits from 1 to 9. Every row, column and outlined 3x3 square should contain each digit exactly once.



FALSE SKYSCRAPERS

95 POINTS (35 + 60)

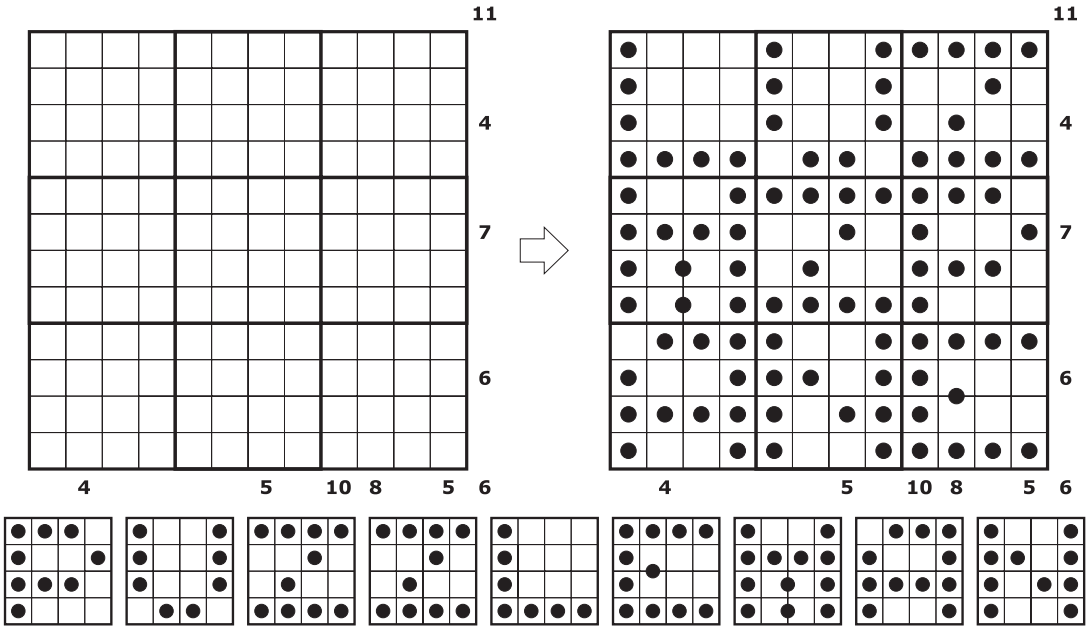
Fill in the grid with digits from 1 to 6 (to 7 in the second puzzle). Digits in every row and every column should be different. In regular skyscrapers digits outside show the number of buildings visible from given direction. In this puzzle all clues are wrong - they are either one less or one more then actual values.



PUZZLEMAN

50 POINTS

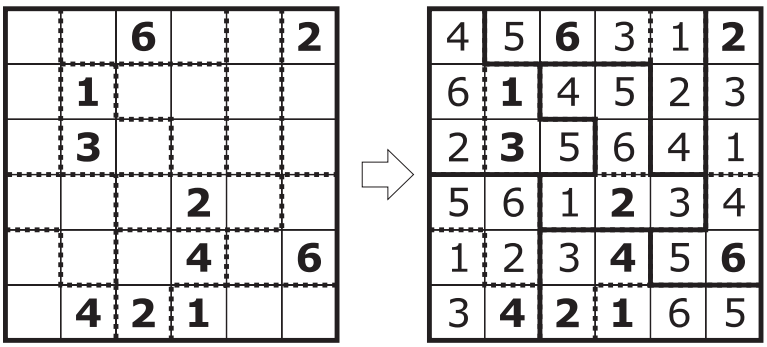
Put the 9 given tiles into the grid without overlapping. The tiles may not be rotated or reflected. Each clues outside the grid show the number of dots which are completely in the corresponding row (horizontal, vertical or diagonal).



SUDOKU BUILDER

90 POINTS (40 + 50)

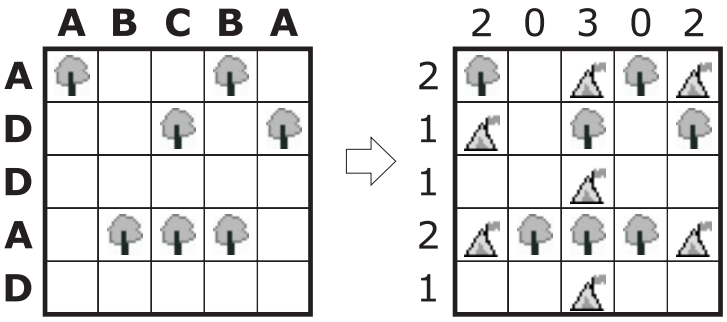
Make 6 six-cells areas by joining 2 given areas and obtain the Sudoku puzzle with irregular areas. Then solve the puzzle: fill in the grid with numbers from 1 to 6. Numbers must be different in every row, column and six-cell area.



ENCRYPTED TENTS

85 POINTS (50 + 35)

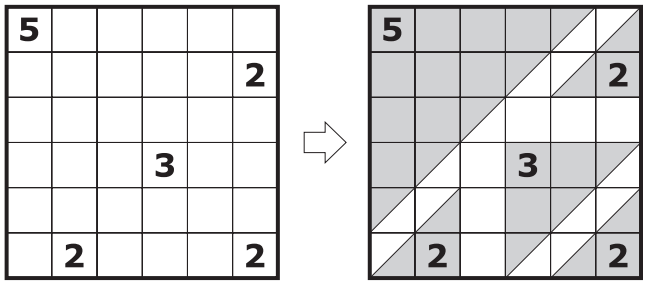
Locate the tents in the grid. Each tree is connected to exactly one tent, and each tent is connected to exactly one tree. Trees and their tents are found in a horizontally or vertically adjacent squares. Tents do not touch each other, not even diagonally. The letters outside the grid are encrypted clues. Different letters mean different digits, the same letters mean the same digits. These clues reveal the total number of tents in the corresponding row or column.



TRIANGLES

40 POINTS (20 + 20)

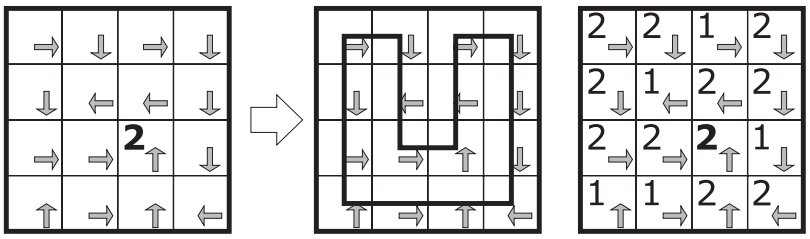
Place some isosceles right-angled triangles into the grid. Triangles cannot touch each other even by a point. All vertices should be in the grid nodes. Every cell with digit N must be completely within a triangle which has legs of length N.



LOOP + ARROWS

65 POINTS (10 + 55)

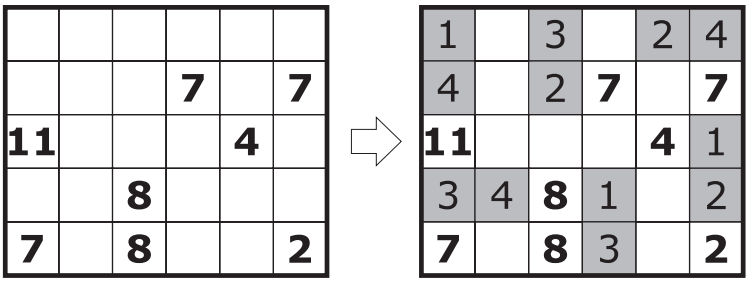
You have two identical grids. In the first grid draw a single closed loop that passes every cell exactly once. Whenever the loop makes a turn in a cell, it turns to the direction shown by the arrow. In the second grid place a digit into every cell. The number of different digits any arrow is pointing equals to the number written on the arrow. Two digits are already given.



DOMINOSWEEPER

130 POINTS (60 + 70)

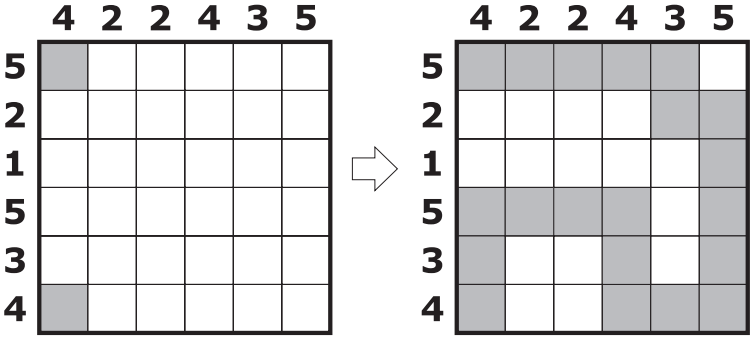
Locate a set of dominoes (from 1 to 6) without doubles in the grid. Domino cannot touch each other, not even diagonally. Digits on the domino halves cannot repeat in any row or column. The given clues indicate the sum of numbers written onto the neighbouring domino halves (diagonal neighbours included). No clue may be covered by a domino.



SNAKE

35 POINTS

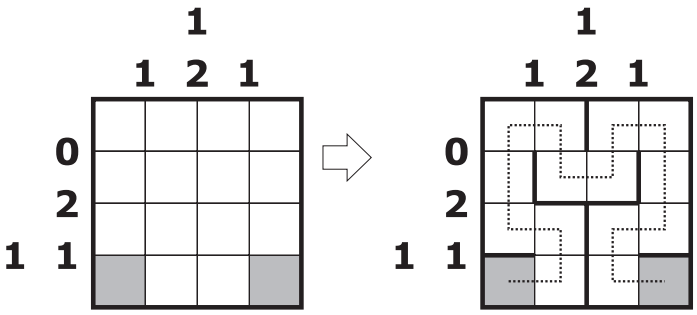
Locate a snake in the grid that does not touch itself, not even diagonally. Numbers outside the grid show the number of snake's cells in the corresponding direction. The first and last cells of the snake are given.



BUILD A MAZE

85 POINTS (55 + 30)

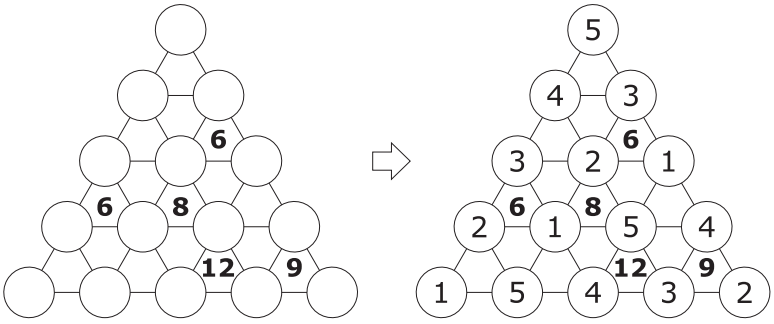
Place some walls in the grid, creating a path going from one grey cell to another and visiting every cell exactly once. Walls are horizontal or vertical lines going along grid lines with their ends at grid nodes. Digits outside the grid show the lengths of all wall segments in corresponding direction. There should be an empty space between two segments.



TRID

80 POINTS (45 + 35)

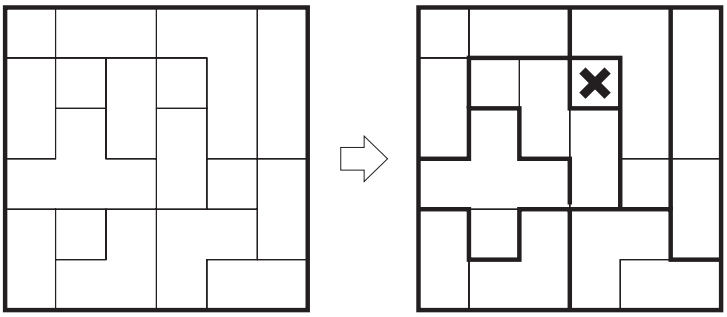
Write digits 1 to 7 into the circles. Digits in one line should be different. Each number in a triangle equals to the sum of digits in the triangle's vertices.



PENTA-GLUING

35 POINTS

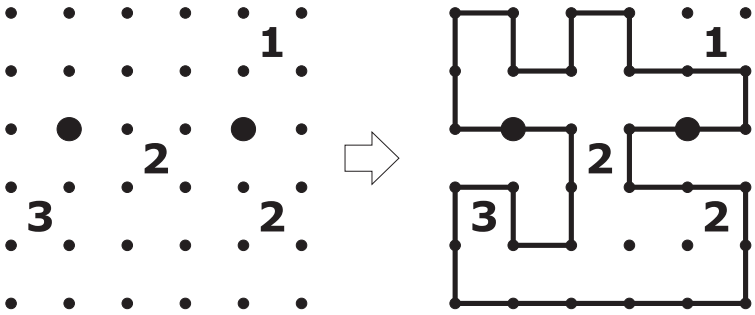
Join some of given areas to form twelve different pentamino elements. X marks square which doesn't belong to any element.



SYMMETRIC FENCE

55 POINTS (25 + 30)

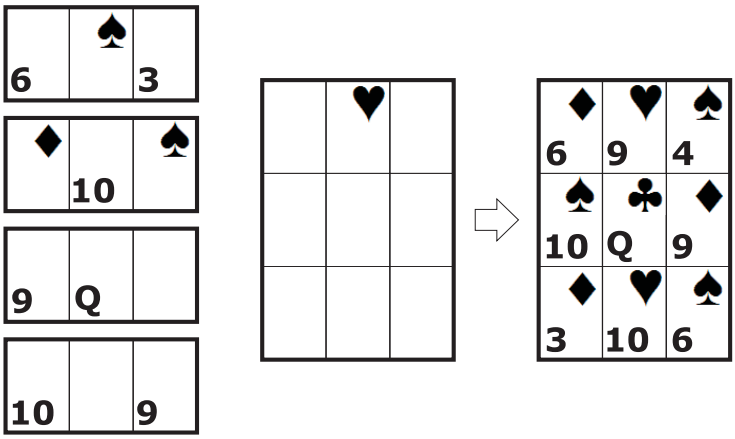
Draw a single continuous loop (a fence) going along the grid lines. The loop may not touch or cross itself. Each number shows the number of sides of the cell used by the loop. The fences part lying inside the biggest rectangle with the centre in the large dot has central symmetry.



3x3 PATIENCE

115 POINTS (55 + 60)

Place nine cards from standard 52-cards deck into the grid. Cards with the same suit cannot touch each other even diagonally. The sum of card's values (Ace counts as 1, Jack, King and Queen as 0) in rows and columns should be equal. Four rows (horizontal from left to right, vertical from top to bottom) from the grid are given. Some symbols in the rows are erased. One card value is already given.



10TH 24 HOURS PUZZLE CHAMPIONSHIP

4-6 SEPTEMBER, 2009
HOTEL BENTA
BUDAPEST

PUZZLES BY
ZOLTÁN HORVÁTH

INSTRUCTIONS BOOKLET

Warm up	35points
Fences	25 points (10 + 15)
Star battle	75 points (30 + 45)
Tiger in the Woods	20 points (5 + 15)
Pentomino	55 points
Domino	55 points
Japanese arrows	45 points (15 + 30)
Battleship variations	50 points (20 + 30)
Penthatlon	150 points (10 + 20 + 30 + 40 + 50)
Every second turn in hexagon	50 points (20 + 30)
ABC-connection	15 points (5 + 10)
Triangles and parallelograms	55 points
Spider web	15 points
Coral finder	30 points (5 + 25)
Fences in the cave	75 points (25 + 50)
Dotted snake	45 points (15 + 30)
Snake on the angular table	40 points (15 + 25)
Tetromino in honey-comb	85 points
Snail	55 points (20 + 35)
24	25 points

Warm up

A) 24
B) 25
C) XXIV

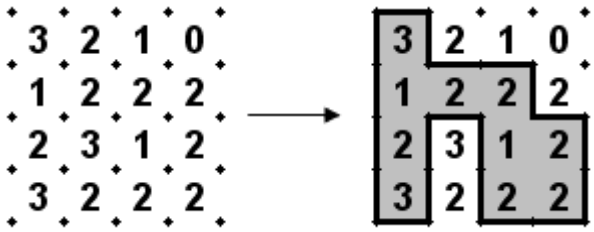
→ **A = C**

Which two numbers equal?

35 points

Fences

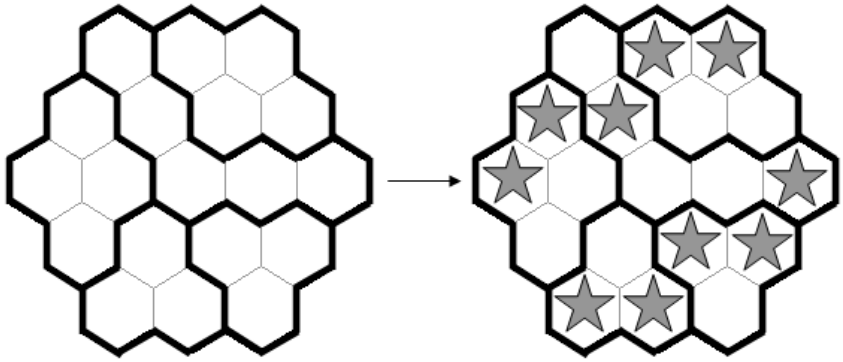
The diagram should contain a path that travels from dot to dot, horizontally and vertically only, and ends where it began, never touching or crossing itself. The numbers that have been placed in the diagram tell you how many of the four sides of the "square" it lies in are used for the path. (The path doesn't necesserily need to touch all of the dots.) Your task is to find this path.



10+15 points

Star battle

Place two stars, the size of one hexa, in each row, each diagonal and each black-edged part of the grid. The black hexas do not contain a star.

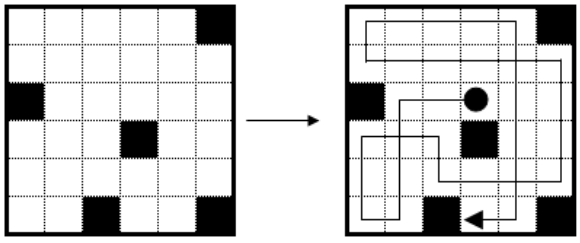


30+45 points

Tiger in the Woods

Draw a line into each figure with keeping the rules below.
The line:
- must pass all white squares
- can only contain horizontal and vertical fragments
- can start and end in any white square
- can intersect but cannot overlap itself
- must be drawn so that whenever it switches direction, that must be kept until hitting either a wall or a black square
- cannot pass twice in the starting or ending field

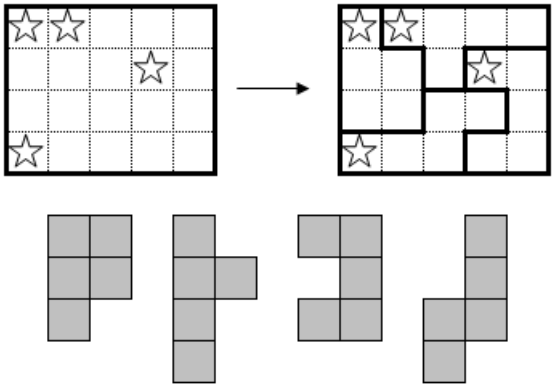
5+15 points



Pentomino

Place the different shapes in the grid such that each figure contains exactly one star. The figures can be rotated and reflected, and they do not overlap each other.

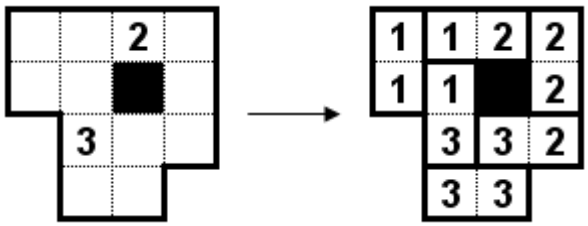
55 points

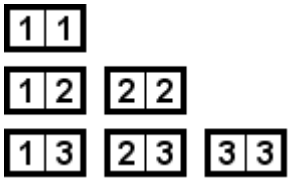


Domino

We have placed a complete domino double 6-set in the grid. In some squares the value of half a stone is indicated. Values of neighbouring half-stones are equal. How are the stones placed, and what is their value?

55 points

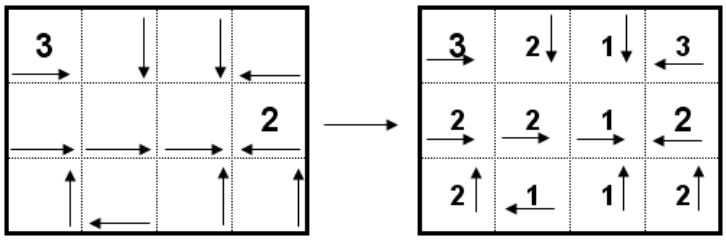




Japanese arrows

Write numbers into the squares such that each number equals to the number of different numbers its arrow is pointing at.

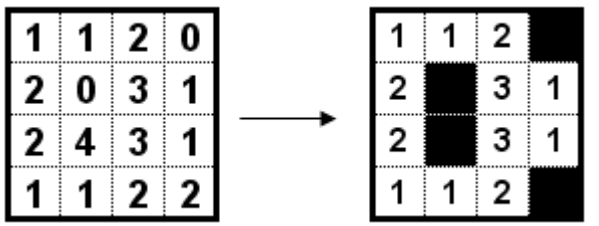
15+30 points



Battleship variations

Locate the position of the fleet in the grid. The ships do not touch each other, not even diagonally. Each white number in the filled grid equals the total number of ship segments in the neighbouring squares: horizontally, vertically and diagonally.

20+30 points



Pentathlon

The grid contains five different puzzles.

10 poins

Right bottom puzzle: Takumi

Fill in the thick-line-contoured areas with numbers. The size of the areas determines which numbers you use. An area with one square contains only the number 1, an area with two squares contains number 1 and 2, and so on. The same numbers dont touch each other.

20 points

Left bottom puzzle: Hexa seven

Write numbers between 1 and 7 into the white hexagons so that the neighbours of each white hexagon are all different. Neighbours of a black square are not necessarily different.

30 points

Left top puzzle: Area occupation

Write digits into the empty squares in a way each digit must be part of a connnected area consisting of as many circles as the digit itself. Two areas of the same size dont touch each other. **At most one** number is given from any area.

40 points

Right top puzzle: Kropki

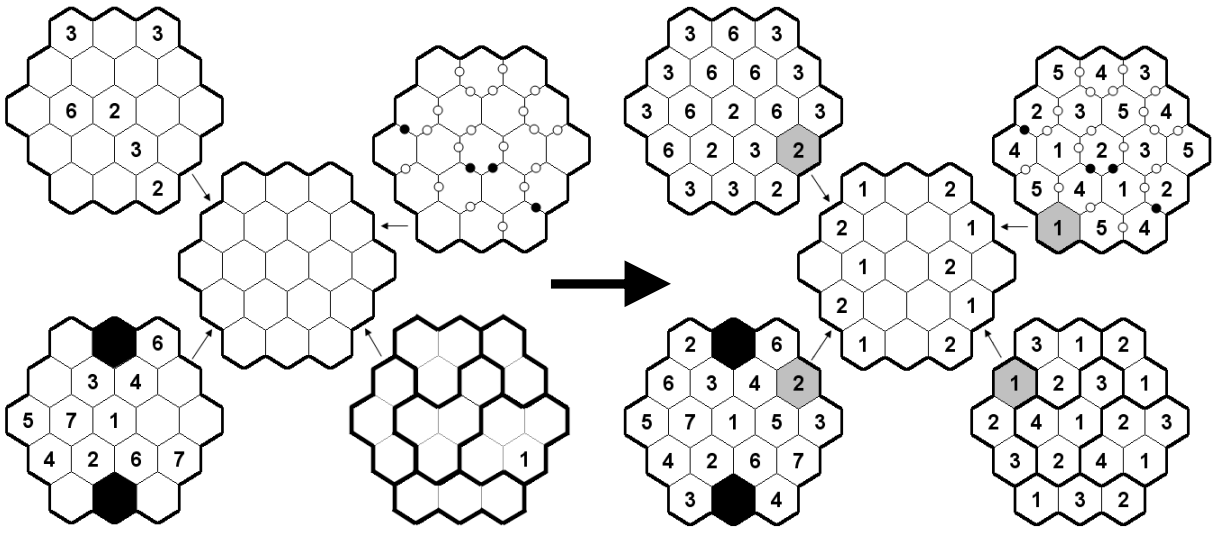
Fill the table with digits from 1 to 9. The numbers cannot appear more than once in any row or diagonal. If absolute difference between two digits in neighboring cells equals 1 then they are separated by white dot. If digit in the cell is a half of digit staying in the neighbouring cell then they are separated by black dot. The dot staying between "1" and "2" can have any of these colours.

50 points

Middle puzzle: Easy as 123

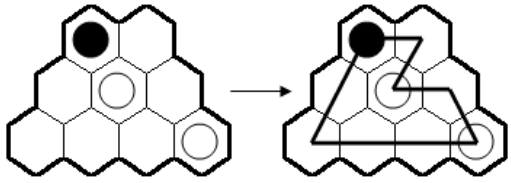
Fill in the numbers 1, 2 and 3, in some order, so that each letter appears exactly once in each row and diagonal. The letters outside the grid indicate the first number seen in that direction.

NOTE: *Just those numbers count where there is an arrow.*
NOTE: *We added a separate figure to the middle puzzle.*
NOTE: *The puzzle bookle does not contain this description and example.*



Every second turn in hexagon

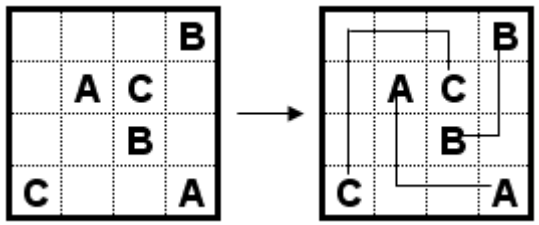
Draw a single continuous loop into the figure that only travels from hex to neighbouring hex. It goes through all hexes exactly once. Along the loop, every second hex where the loop makes turn is marked with a circle. The loop's line makes a 60 degree turn at the white circles and makes a 120 degree turn at the black circles.



20+30 points

ABC-connection

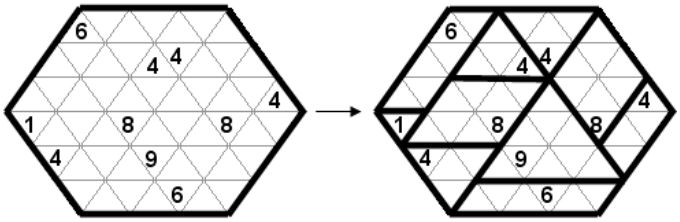
Connect the same symbols with a continuous line. The lines don't intersect or overlap. The lines can only pass through the centres of the squares.



5+10 points

Triangles and parallelograms

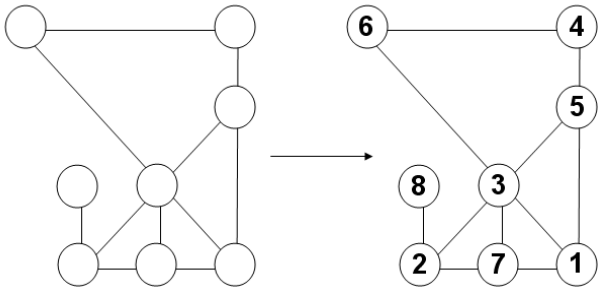
Divide the figure into triangles and parallelograms. Each shape must contain exactly one number, and this number must show the area of the enclosing shape. The area of a single field is 1.



55 points

Spider web

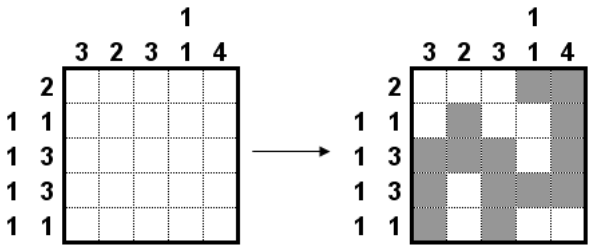
Place the numbers 1~10 so that the sum of the numbers on a straight line comes to 15.



15 points

Coral finder

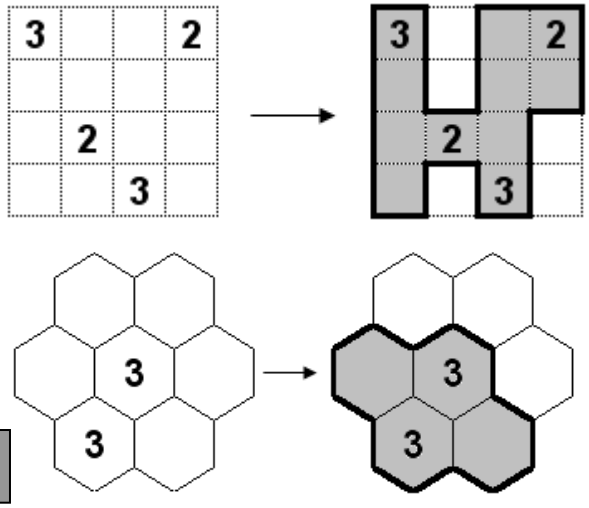
The figure indicates a sea with a coral hinding. The coral consists of continuous fields (diagonal neigborhood is not enough) and cannot touch itself even diagonally. The numbers indicites the continous parts of the coral in the given row or column (similary as in the "Paint it black" puzzles). To make the problem more difficult, the numbers are given in increasing order. Finally, no part of the coral can cover a 2x2 square entirely.



5+25 points

Fences in the cave

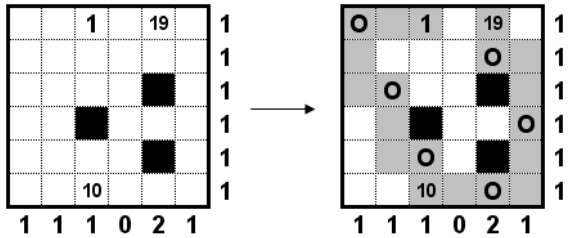
Draw a single closed loop along the edges. All numbers are inside the loop. Numbers have a dual meaning in this puzzle. Firstly, they reveal the number of loop segments adjacent to them, similarly to the classical Fences puzzle. Secondly, considering the loop's interior a cave, they also reveal how many squares are visible within the cave from the square the number is in (which is not included).



25+50 points

Dotted snake

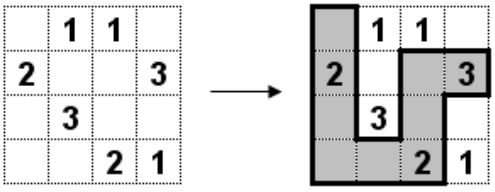
A sea serpent, 25 metres (1 square=1 metre) long lies hidden under the surface of the water. The animal is bent horizontally or vertically, but doesn't touch itself anywhere, not even diagonally. The snake cannot cross rocks (indicated by black squares.) There is a dot in every 3rd square. (3., 6., … 45.) The numbers beside and below the diagram show how many dots are there in the given row or column. Its head, middle and tail are given.



15+30 points

Snake on the angular table

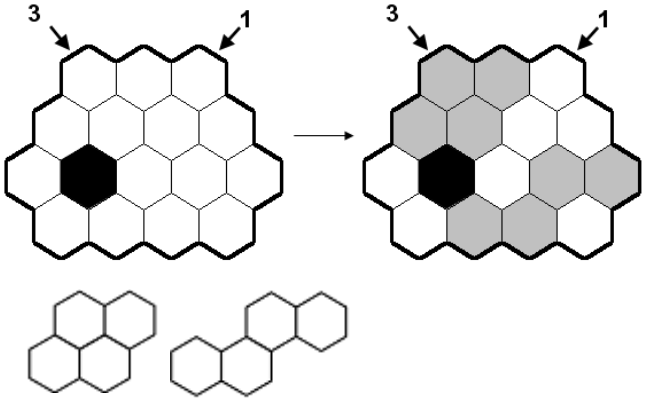
A sea serpent is hidden under the surface of the water. The animal is bent horizontally or vertically, but doesn't touch itself anywhere, not even diagonally. Numbers in the grid show the number of sides of the cell used by snake.



15+25 points

Tetromino in honey-comb

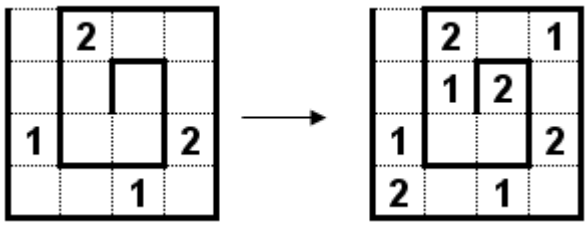
Place all seven tetrominoes in the honey-comb. They dont touch each other. Black hexagons do not contain any parts of tetraminoes. The number indicate how many hexagons, as parts of tetrominoes, are to be found in respective direction. The shapes can be rotated but not reflected.



85 points

Snail

Fill the grid with the digits 1 to 3 (in the biggest grid 1 to 4) so that all three (four) numbers appear exactly once in each row and column. If you go in a spiral from the entrance to the center of the snail, the numbers should follow in order 1-2-3-(4)-1…



20+35 points

24

This is the 24th puzzle type in this set. Pick eight types from the other 23 types (the cover sheet gives you a clue). Read the letters next to the chosen puzzles. A good logic shall reward you with a meaningful solution.

25 points

NAME:	POINTS:

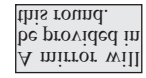
10TH 24 HOURS PUZZLE CHAMPIONSHIP

4-6 SEPTEMBER, 2009
HOTEL BENTA
BUDAPEST

PUZZLES BY
CIHAN ALTAY & MEHMET MURAT SEVIM

INSTRUCTIONS

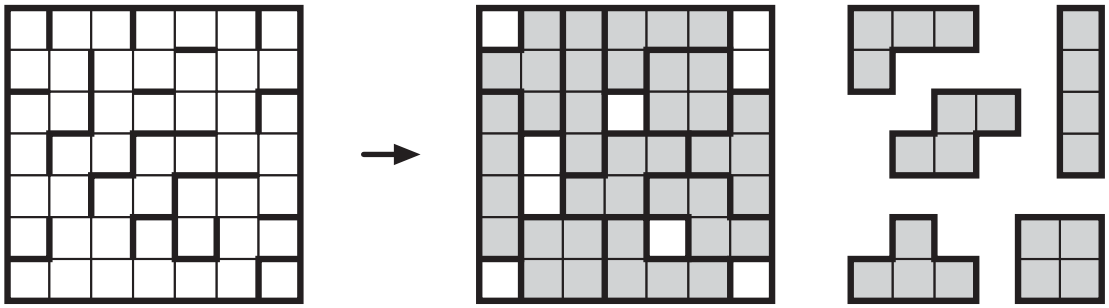
1. Bordomino	15 points
2. T-junctions	45 points (10+10+25)
3. Mirror Mirror	120 points (50+70)
4. Battleships	95 points (30+65)
5. Offspring	90 points (25+65)
6. Triple ABC Connection	60 points (20+20+20)
7. Sum Boxes	90 points (40+50)
8. Spectators	80 points (30+50)
9. Open Fence	140 points (60+80)
10. Snpoku	150 points
11. Déjà Vu	70 points
12. Looking Glass	45 points (45, 30, 20, 10, 5)
Total	1000 points



1. Bordomino

Place four tetromino sets into the grid, without overlapping each other. Tetrominoes can be rotated and/or reflected. Every wall inside the grid is a border of at least one tetromino.

15 POINTS



Example with two sets

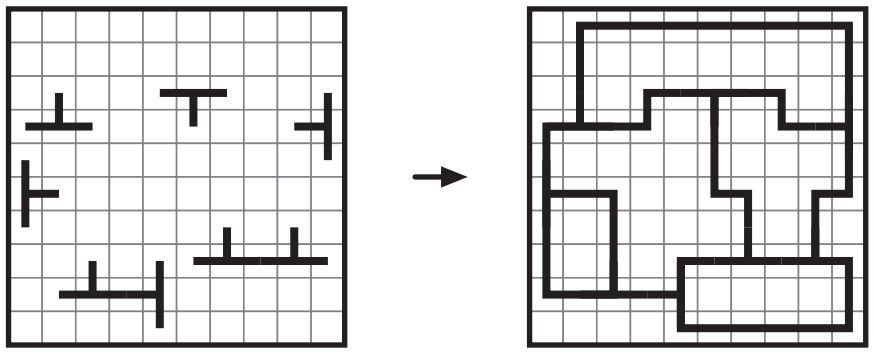
2. T-junctions

Draw a single interconnected road map with no dead-ends, that travels between neighbouring cells horizontally and vertically. With the exception of junctions, the road never touches itself, not even diagonally. Every T-junction is already given; and there are no crossroads (+).

10 POINTS

10 POINTS

25 POINTS

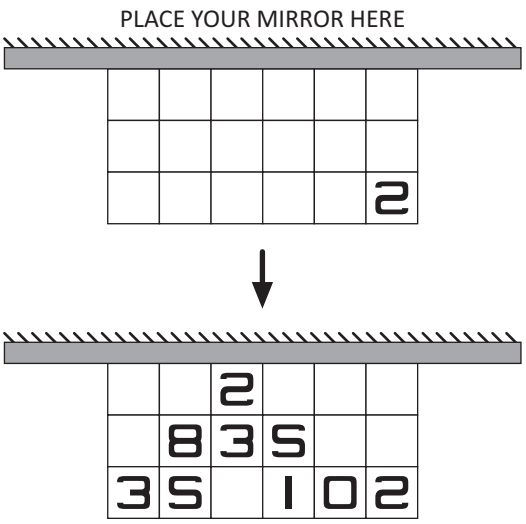


3. Mirror Mirror

Place the mirror onto the marked area to make the puzzle grid a full square, and work with the mirror to solve the puzzle: Enter each one of the given words exactly once into the grid crisscross style: Words appear either across or down and all words formed in the grid must be in the word list. All words must interconnect, and some letters may already be placed.

50 POINTS

70 POINTS



12
28
32
35
51
85
102
105
832
835
3523

Example with numbers

4. Battleships

Locate the 10-ship fleet into the grid so that ships don't touch each other, not even diagonally. Ships may be located either horizontally or vertically. Each number on the side reveals the total number of ship segments seen in that row or column.

30 POINTS

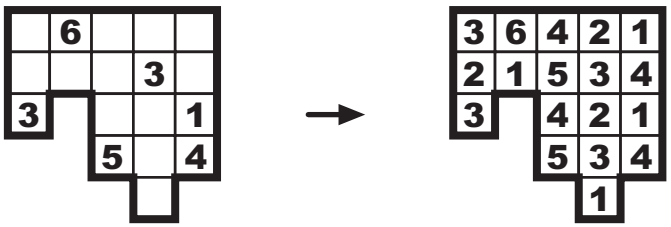
65 POINTS

5. Offspring

Locate a digit from 1 to 9 into each cell of the grid, so that identical digits don't touch each other, not even diagonally. Every digit -except 1- must have all digits smaller than itself in its immediate neighbourhood (cells sharing an edge or a corner).

25 POINTS

65 POINTS



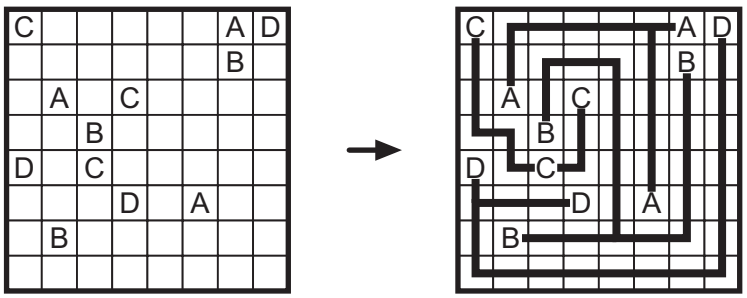
6. Triple ABC Connection

Connect each identical letter triple with a continuous line -with or without a branch- that travels only horizontally and vertically, connecting adjacent cells. Each cell may be used at most once.

20 POINTS

20 POINTS

20 POINTS

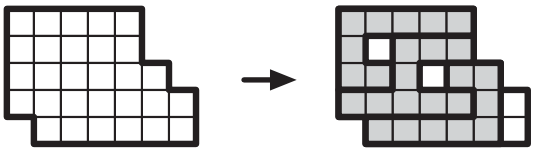


7. Sum Boxes

Place some digit figures (as shown) into the grid, following the grid lines, so as to arrive at the maximum sum of digits possible (18 for the example grid). Figures can be used any number of times and can be rotated; but they cannot be reflected and they cannot overlap each other.

40 POINTS

50 POINTS

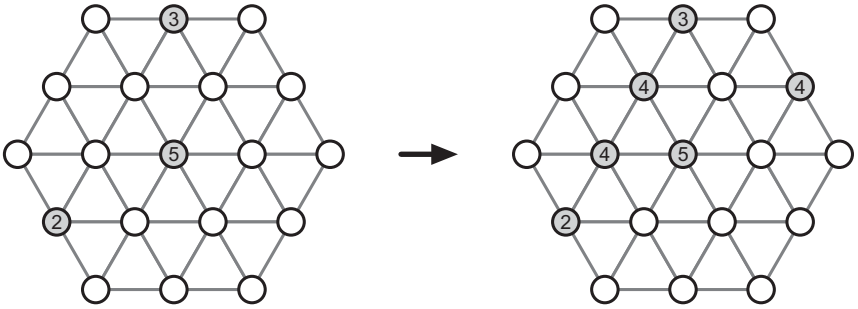


8. Spectators

There are spectators on some of the intersection points of the grid, at most one spectator per point. Each spectator has a number which gives the number of others seen. A spectator sees another one if the latter is not blocked by any other through a straight line. Find the missing spectators (You don't need to write their numbers).

30 POINTS

50 POINTS

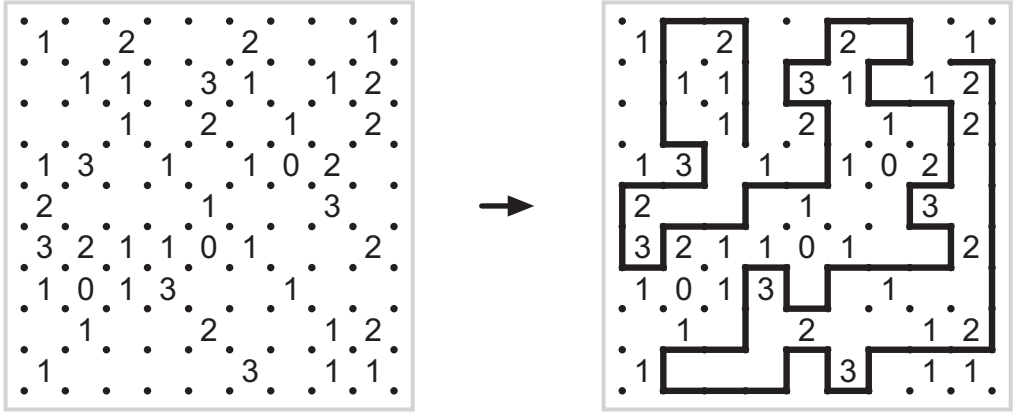


9. Open Fence

Connecting the dots horizontally and vertically, draw a path that doesn't touch or cross itself. Each number gives its number of edges used by the path.

60 POINTS

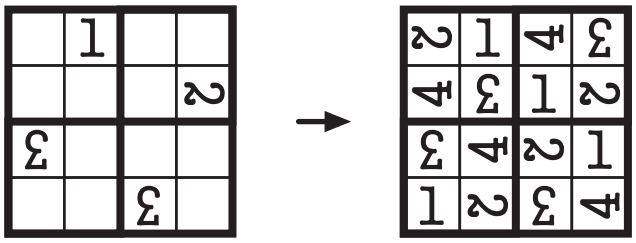
80 POINTS



10. Snpoku

Fill in the 8x8 grid with digits from 1 to 8, so that in each row, in each column and in each 2x4 box all digits are different. Additionally, exactly two digits must be seen upright from each one of the four compass directions per row, column and box. Note that "8" is bidirectional; and for each 8, you have to decide which side is up.

150 POINTS

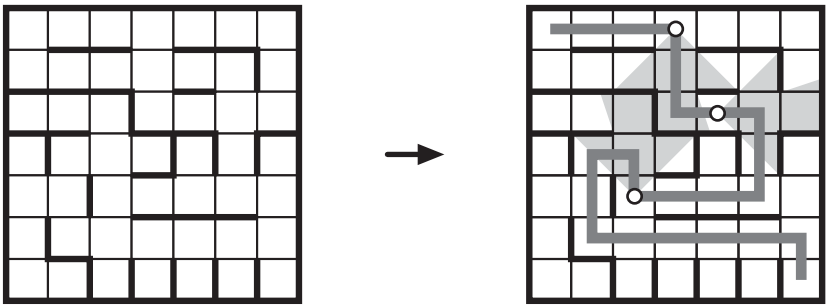


Example with digits from 1 to 4; and one digit per direction.

11. Déjà Vu

A robot travels in a labyrinth with walls, from the top-left corner to the bottom-right, never visiting a cell more than once. On the center of each cell on its way, the robot takes a photo with a 90-degree angle just when it's about to move forward to the next cell. Three of these photos turn out to be identical. Find the robot's path, and mark the cells where these three photos are taken.

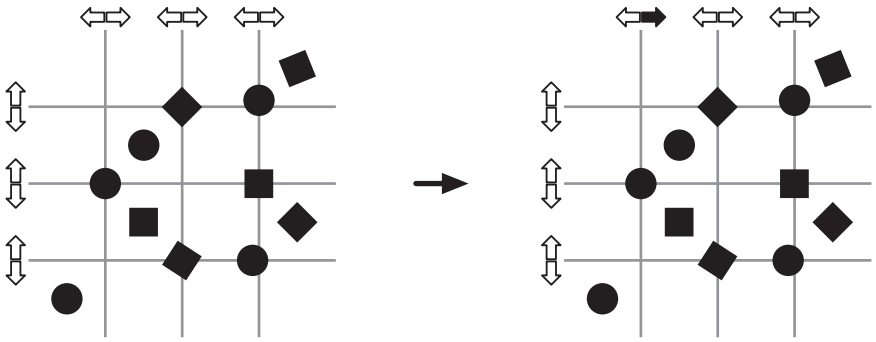
70 POINTS



12. Looking Glass

Place the mirror onto one of the designated locations at full length, perpendicular to the page, facing either way. Once the mirror is placed, there will be figures seen in the mirror and in front of it. Anything behind the mirror is out of sight. Count the number of appearances for each given figure already presented on the grid (Incorrect figures are not counted) and maximize the product of these numbers. Mark the location of the mirror. Top five highest possible products get 45, 30, 20, 10 and 5 points respectively.

? POINTS



Example has 12 squares and 7 circles, for a product of 84.

Name:	Points:

10th 24 Hours Puzzle Championship

4-6 September, 2009
Hotel Benta
Budapest

Puzzles by

Roland & Ulrich Voigt

Instruction Booklet

Squares	50 points (20 + 30)
T-Dissection	55 points (15 + 40)
Snake Pit	60 points (25 + 35)
Four Steps	60 points (15 + 45)
Word Spiral	75 points (30 + 45)
Fences Variation	75 points (25 + 50)
Kropki	75 points (20 + 55)
Stairs	90 points (30 + 60)
Hexagonal Fillomino	95 points (25 + 70)
Easy as ABCD with Dominoes	100 points (40 + 60)
Japanese Sums and Products	125 points (55 + 70)
Star Battle	140 points (50 + 90)

Note: There are twelve puzzle types and two puzzles of each kind. The actual puzzle booklet does not contain examples; so if you need the examples during competition, keep this instruction booklet handy.

10th 24 Hours Puzzle Championship
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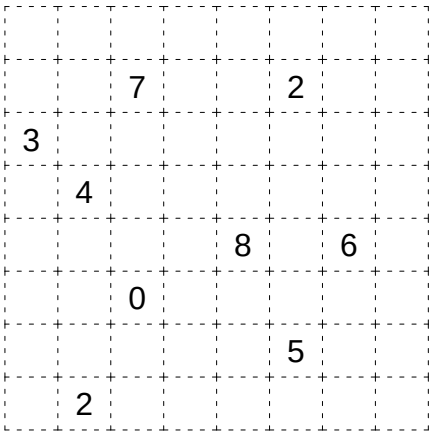
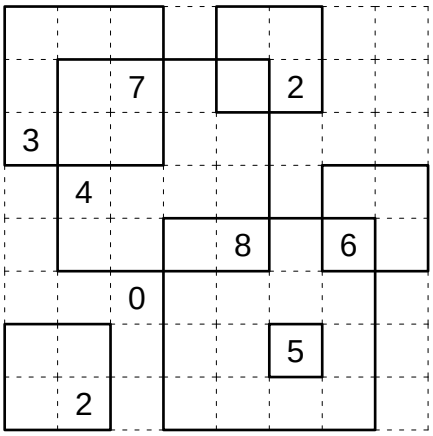
Budapest

Puzzles by
Roland & Ulrich Voigt

1. Squares — 20+30 points

Draw some squares of various sizes into the grid, along the gridlines. Two squares may not share a corner or part of an edge; apart from that, squares may overlap in any way. Each number indicates the sum of the side lengths of all squares it is contained in. Every square must contain at least one number.





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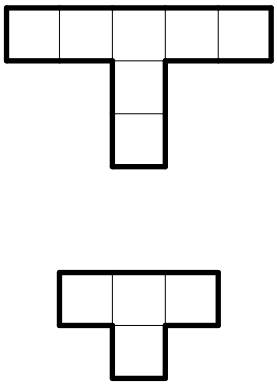
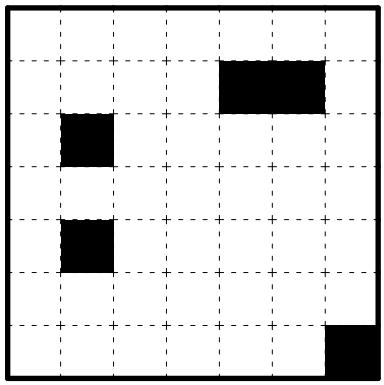
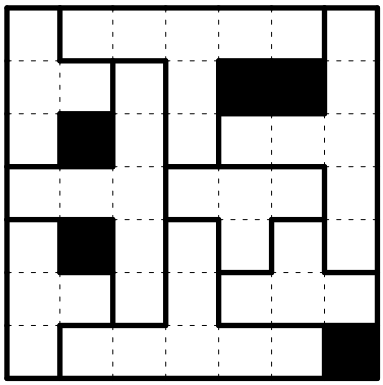
2. T-Dissection — 15+40 points

Divide the grid into several copies of the given shapes; both shapes may be rotated. Black squares may not be part of any piece, and no white square may remain.







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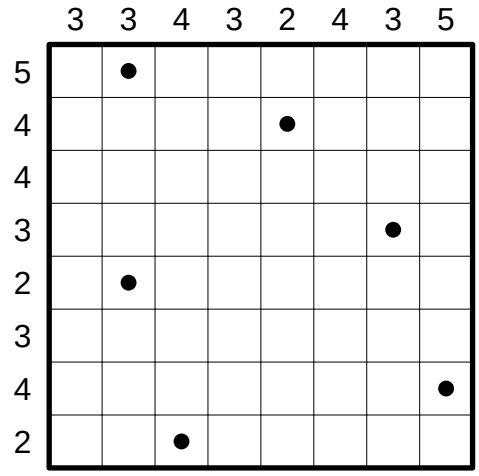
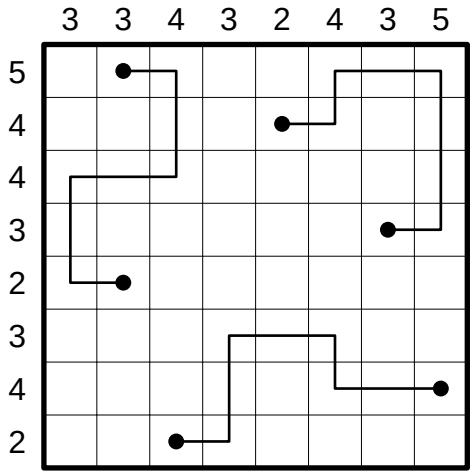
3. Snake Pit

25+35 points

Place three snakes of length 13 (first puzzle) or length 17 (second puzzle) into the grid, so that they do not touch themselves or each other, not even diagonally. All heads and tails are given. The numbers outside the grid indicate the number of squares occupied by the snakes in the respective row or column, heads and tails included.

In the example, snakes have length 9.

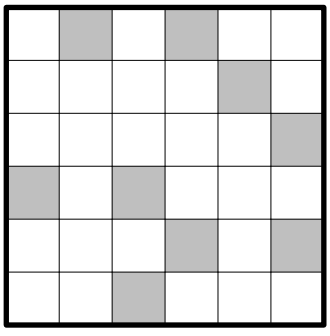


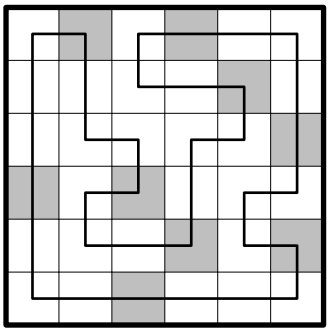


4. Four Steps

15+45 points

Draw a closed loop into the grid, that travels only horizontally and vertically and visits each square exactly once. Along the path, every fourth square must be a grey one.





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Puzzles by
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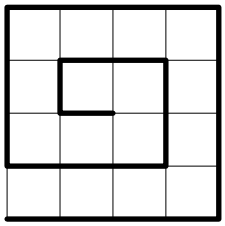
5. Word Spiral — 30+45 points

Place the given words into the grid, so that they can be read along the spiral, starting outside and travelling inwards. The words do not overlap, and no empty squares remain. A row or column may not contain the same letter more than once.

Note: Only the bold parts of the words shall be used for the puzzle.

United Kingdom, **London**
France, **Paris**
Bulgaria, **Sofia**



I	F	O	S
A	S	I	N
P	A	R	O
L	O	N	D

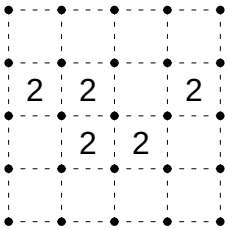
---

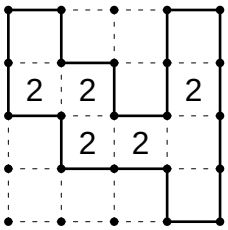
6. Fences Variation — 25+50 points

Draw a single continuous loop by connecting neighboring dots along the dotted lines. The numbers indicate how many edges of a square are used for the loop. The loop may not touch or cross itself, and it doesn't need to touch all of the dots.

In this variation, all given digits '2' must lie inside the loop. In reverse, inside the loop all digits '2' (all squares where according to Fences rules a digit '2' could be placed) are already placed.

Note: Nothing is known about possible digits '2' outside the loop.





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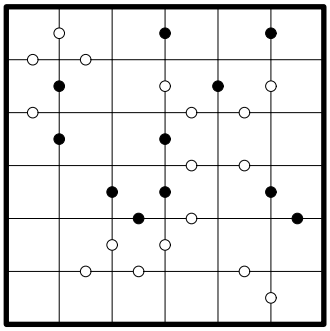
Puzzles by
Roland & Ulrich Voigt

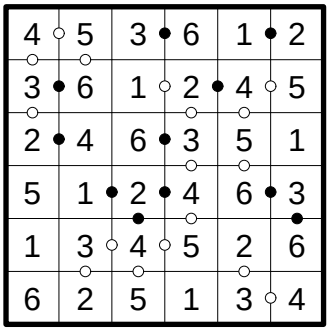
7. Kropki — 20+55 points

Place digits 1–7 (first puzzle) or 1–9 (second puzzle) into the grid, so that each row and column contains each digit exactly once.

A black circle between two horizontally or vertically adjacent digit indicates that one of these digits is exactly twice the value of the other; a white circle indicates that the difference between these digits is exactly 1. If there is no circle between two adjacent digits, none of these two properties holds.

In the example, digits 1–6 are used.





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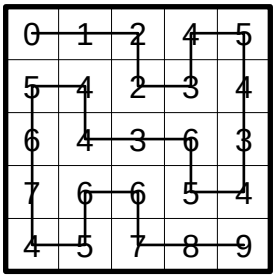
8. Stairs — 30+60 points

Find a way from the top left corner to the lower right corner, travelling only horizontally and vertically. In each step along the path, your „level“ (the digit in the square where you are standing) may go down any number, remain constant or go up 1, but not go up more than 1. You must visit all squares exactly once on your way.

0	1	2	4	5
5	4	2	3	4
6	4	3	6	3
7	6	6	5	4
4	5	7	8	9



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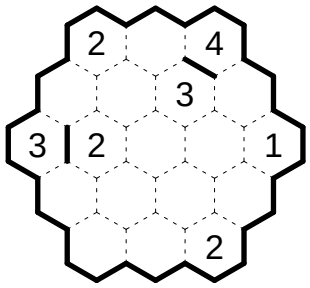
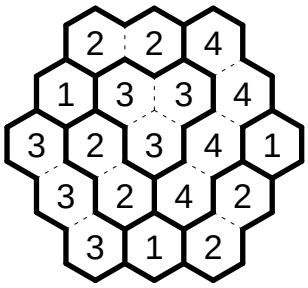
Roland & Ulrich Voigt

9. Hexagonal Fillomino 25+70 points

Divide the grid into several areas and fill in a number into each cell. Within each area, all numbers must be the same and equal to the number of cells of that area. Areas of same size may not touch each other.

Given numbers may belong to the same area, and there may be areas from which no number is given at all, even with higher numbers than all the given ones.





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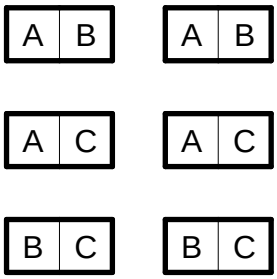
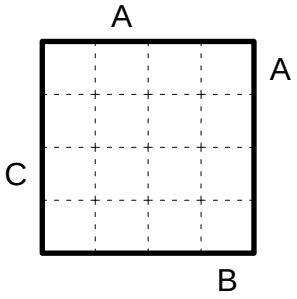
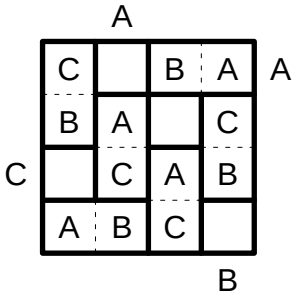
10. Easy as ABCD with Dominoes 40+60 points

Place the given set of dominoes into the grid, so that in each row and column, each letter appears exactly once; two squares remain empty in each row and column. The letters outside the grid indicate which letter comes first in the respective row or column. All dominoes may be rotated.

In the example, only one square remains empty in each row and column.







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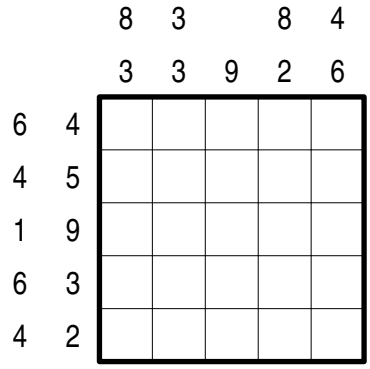
Roland & Ulrich Voigt

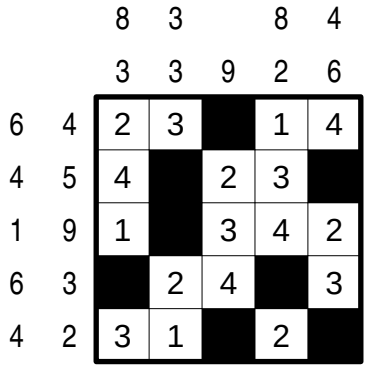
11. Japanese Sums and Products 55+70 points

Blacken some squares in the grid, then enter digits 1–6 (first puzzle) or 1–7 (second puzzle) into the remaining squares, so that no digit repeats in any row or column.

The numbers outside the grid indicate the sums or products of all blocks of consecutive (no black square between them) digits, in correct order. Single digits are given as well.

In the example, digits 1–4 are used.





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12. Star Battle 50+90 points

Place stars into the diagram, so that each row, each column and each outlined area contains exactly two stars. The stars have the size of one square each and may not touch each other, not even diagonally.