PART 2

C L A S S I C S

6th October, 1999
15:30 – 18:00 (150 min)
Maximum score: 1430 points

Fit-in Crossword	35 points
Rebuild the Domino-set	95 points (35+60)
One-way Traffic	65 points (25+40)
Number-crossword	85 points (25+60)
Hiroimono	95 points (20+30+45)
ABCDE Partitioner	115 points (15+40+60)
Magic Squares	120 points (15+45+60)
Poker	100 points
Counting With Letters	120 points (15+45+60)
Minesweeper	75 points (15+25+35)
Two Makes a Cube	30 points (15+15)
ABCD Connection	95 points (20+30+45)
Paint It Black	65 points
Scrabble Puzzle	65 points
Mastermind	85 points (10+20+20+35)
Bisection	145 points (25+50+70)
From 0 to 9	40 points

PUZZLE 1 (35 points)　　Fit-in Crossword

Put the listed Latin words in the grid so as to form a regular crossword puzzle.

	■		■	
	■		■	
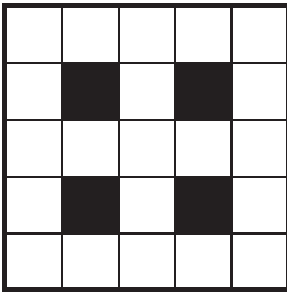
☐ ALEUS
☐ APPIA
☐ ASSIS
☐ AXONA
☐ ORSUS
☐ POSTE

☒ ALEUS
☒ APPIA
☒ ASSIS
☒ AXONA
☒ ORSUS
☒ POSTE

| A	P	P	I	A
X	■	O	■	S
O	R	S	U	S
N	■	T	■	I
A	L	E	U	S
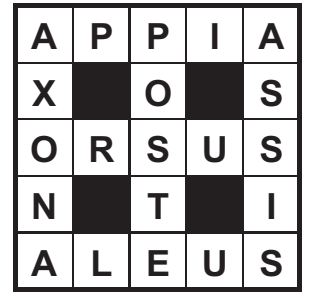
PUZZLE 2 (35+60 points)　　Rebuild the Domino-set

We have placed a complete set of 28 dominoes in the diagram. However, the sides of the dominoes have been removed and the spots have been replaced by numbers. Can you draw the sides in the diagram to show exactly how the dominoes are positioned?
In the examples, the domino-set consists of only 6 dominoes.

0	0

0	1		1	1

0	2		1	2		2	2

2	1	0	0
1	1	0	0
1	2	2	2

| 2	1	0	0
1	1	0	0
1	2	2	2
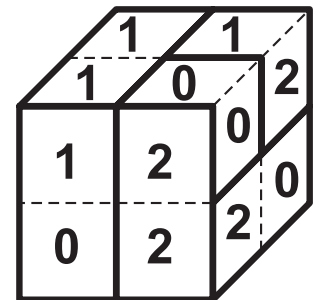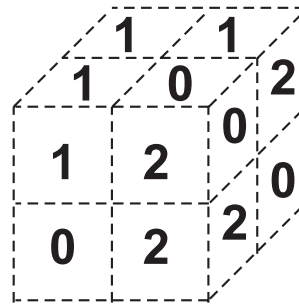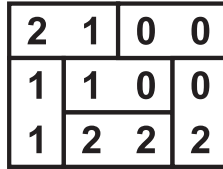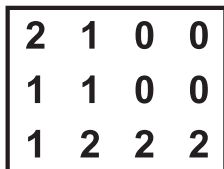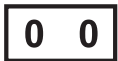
PUZZLE 3 (25+40 points)　　One-way Traffic

The drawing is a part of the map of a small city. The 'P' signs are for parking places, the black boxes are shops. Those streets where you can find arrows show the direction of the one-way traffic. Draw one route that starts from one of the parking places, arrives to another one and goes through all the shops and the remaining parking place, too. Of course, it is not allowed to go against the arrow in the one-way streets. Each street and crossroad could be used only once.

Example:

not allowed!
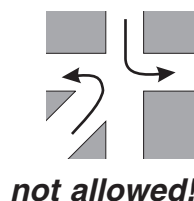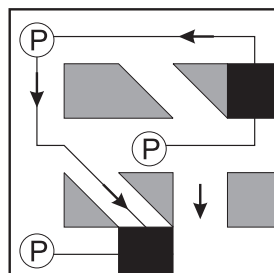
PUZZLE 4 (25+60 points)

Number-crossword

Enter digits in the grid – one per square – so that the digits in each series of white squares add up to the number in the accompanying grey-colored cell.

A number above a diagonal refers to the digits to be filled in to the right of that cell.

A number under a diagonal refers to the digits to be filled in under that cell. The digit 0 is not used, and no digit is ever repeated in a group.

	11	21	8
24			
10			
6			

	11	21	8
24	8	9	7
10	2	7	1
6	1	5	
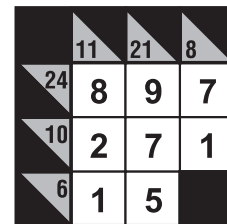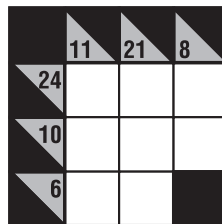
PUZZLE 5 (20+30+45 points)

Hiroimono

"Hiroimono", which means picking up something, is one of the Japanese traditional puzzles. Beginning in the black stone numbered 1, you have to pick up all of the white stones and number them in the order in which you pick up according to the following conditions.

The conditions are:

– You should go along lines horizontally or vertically.

– You can change directions when you pick up a white stone. But you most not return.

– You must pick up the white stones which you come across. If you pass the place where you have picked up a white stone once, you can't change directions anymore because there is no stone there.
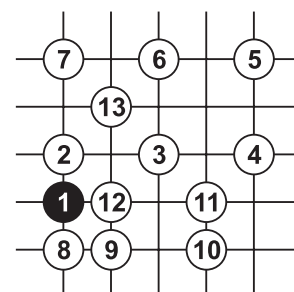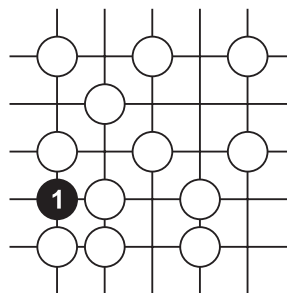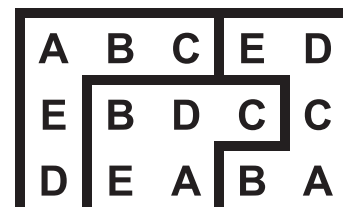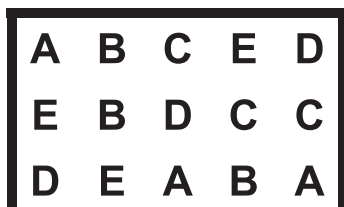
PUZZLE 6 (15+40+60 points)

ABCDE Partitioner

Divide the grid into separated pentominoes in a way that each section contains exactly one of each letter. Some of the pentominoes may be of identical shapes.

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

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

PUZZLE 7
(15+45+60 points)

Magic Squares

Fill in the square with the figures from 1 to 9 (or from 1 to 6) in such a way the figures in all rows and all columns and all smaller sections (3x3 or 2x3) differ from each other. Diagonally the repeating of the figures is allowed.

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

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

PUZZLE 8 (100 points)

Poker

Place 25 cards of the deck of 28 cards into the figure so that all the rows, columns and diagonals of the figure contain exactly the indicated combinations. A few cards have already been placed, and these cards have been crossed in the deck below the figure.

You may use your own notation for marking the colors of the cards. If you do so, please define your notation at the left side of the deck, left to the '=' signs in front of the color signs.

The poker combinations used in this puzzle are as follows:

ONE PAIR: K, K

TWO PAIRS: K, K, Q, Q

DRILL: K, K, K

STRAIGHT: A, 8, 9, 10, J

FLUSH: ♦, ♦, ♦, ♦, ♦

FULL HOUSE: DRILL+PAIR

POKER: A, A, A, A

STRAIGHT FLUSH: ♣ (8, 9, 10, J, Q)

ROYAL FLUSH: ♠ (9, 10, J, Q, K)

STRAIGHT → / POKER / STRAIGHT / STRAIGHT / POKER / TWO PAIRS / STRAIGHT

Column labels: TWO PAIRS, FLUSH, ROYAL FLUSH, PAIR, STRAIGHT FLUSH

Figure cards placed: ♣8 | | | | ; ♠8 | | | | ♥10 ; | | | ♦J | ; ♠A | | | | ♥Q ; ♦Q | | | |

	8	9	10	J	Q	K	A
=♣	X		X	X	X	X	X
=♦	X	X	X	X	X	X	X
=♥		X	X	X	X	X	X
=♠	X		X	X	X	X	X

Deck:
♣8	♦K	♣K	♠K	♥K
♠8	♦9	♣Q	♠J	♥10
♠Q	♦8	♣10	♦J	♦9
♠A	♦A	♣A	♠A	♥Q
♦Q	♦10	♣J	♠10	♥J

PUZZLE 9
(15+45+60 points)

Counting With Letters

In these arithmetical operations the numbers are substituted by letters. The same letter denotes always the same figure, and different letters always denote different figures. The underlined places are for ANY digits. Work out the numbers in the arithmetical operations.

```
  B O B  x  B E N
    M E N
  J O E
_ _ _
O R S O N
```

```
  1 2 1  x  1 6 8
    9 6 8
  7 2 6
1 2 1
2 0 3 2 8
```

PUZZLE 10 (15+25+35 points)

Minesweeper

There are some mines hidden in the diagram. The figures in the diagram indicate the number of mines that can be found on the squares immediately adjacent to that square – horizontally, vertically or diagonally. There is a maximum of one mine per square. Squares with a figure do not contain mines. Notes: only solutions with exactly the indicated numbers of mines will be accepted.
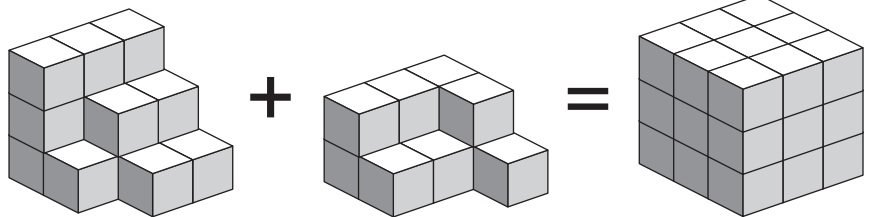
	3		
		1	
2			
		2	

PUZZLE 11 (15+15 points)

Two Makes a Cube

Which two pairs can be used to form cubes (like in the example)?

PUZZLE 12 (20+30+45 points)

ABCD Connection

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

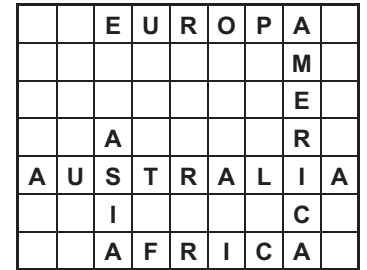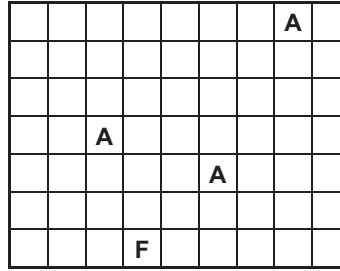# PUZZLE 13 (65 points)

Paint it Black

The numbers on the left of each row and the top of each column tell you how many groups of black squares there are in that line and, in order, how many consecutive black squares there are in each group.

PUZZLE 14 (65 points)

Scrabble Puzzle

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

Example:
AFRICA, AMERICA, ASIA, AUSTRALIA, EUROPA.

PUZZLE 15 (10+20+20+35 points)

Mastermind
(1~3)

Try to find out the correct order of the digits with the help of the information given by the black & white dots. The number of the black dots shows the number of the digits being at the correct position and the number of the white dots shows how many more appropriate digit are in the guess but not at the correct position. Any digits can be more than once in the solution.
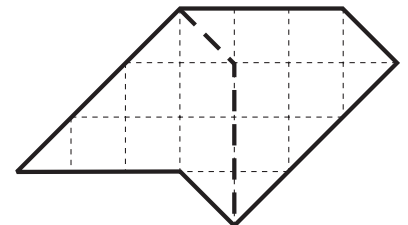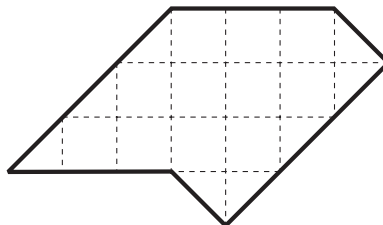
```
1  3  3      1  3  3      ● ○
3  1  3      3  1  3      ● ○
?  ?  ?      3  3  2      ● ● ●
```

PUZZLE 16 (25+50+70 points)

Bisection

Divide the figure into two parts. The shape of one part must be the mirror image of the other part, rotated by 90 degrees. The dividing lines always pass only through the gridlines or through the diagonal lines of the grids.
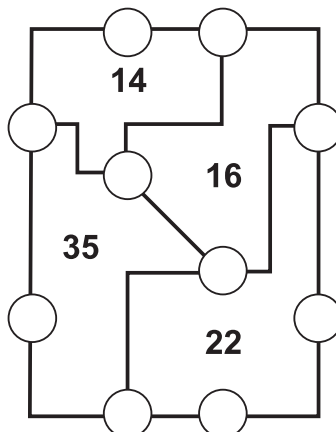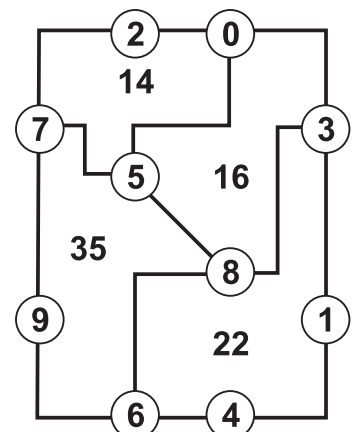
PUZZLE 17 (40)

From 0 to 9

Write the numbers from 0 to 9 into the circles. Those areas, which contain number, the sum of the digits around the areas must be the number written in the area.

Important: The difference between any digits that are connected with a line (even with a broken line) must be **at least two**!

PART 3

O P T I M I Z E R

7th October, 1999
9:00 – 9:35 (35 min)
Maximum score: ????? points

Robot Optimizer	?? points (SUM–130)*8
Divide into Squares!	?? points (50–N)*8
Number Collection	?? points (20–X)*8

BONUS FOR THE BEST SOLUTIONS

	1ST BEST(S)	2ND BEST(S)	3RD BEST(S)	
Robot Optimizer:	50	25	10	points
Divide into Squares!:	50	25	10	points
Number Collection:	50	25	10	points

PUZZLE 1 (??? points)

Robot Optimizer

Find the optimal place of the robot (consists of 25 squares) in such a way that the sum of the numbers covered should be as high as possible. The robot can be rotated, but its body must be within the border of the field. The body of the robot must not cover any of the black squares. Warning! There is a blank square in middle of the robot, it can be on a black square.

In this solution the SUM is 138.

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

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

PUZZLE 2 (??? points)

Divide Into Squares!

Divide the following grid into as less squares as possible! The squares must not contain any of the black squares. The squares must not overlap each other and finally they have to cover the full grid, with the exception of the black squares. This solution consists of N=6 squares.
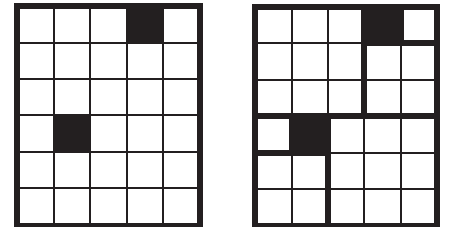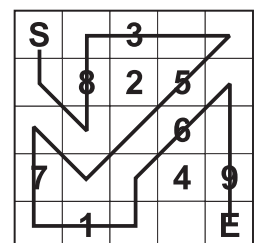
PUZZLE 3 (??? points)

Number Collection

Draw a continuous line into the grid using the following rules:
– the line starts from the square marked by 'S' letter and ends in the square marked by 'E' letter
– the line connects the centre points of the neighbouring squares
– the line must not cross itself and can go through one square maximum once
– the line must not be broken in those squares, which contain a digit
– the line must not go from a square containing a digit directly to a neighbouring square containing also a digit
The goal is to minimise the sum of the digits not crossed by the line.
The sum is in this solution X=6.

S		3		
	8	2	5	
			6	
7			4	9
	1			E

C R A C K   I T   O N !
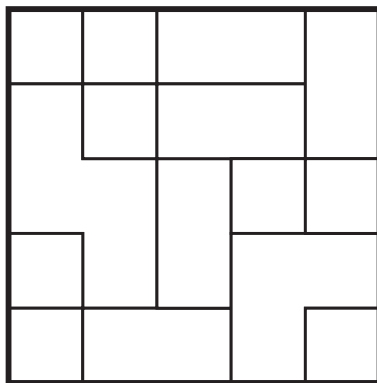
7th October, 1999
9:40 – 10:15 (35 min)
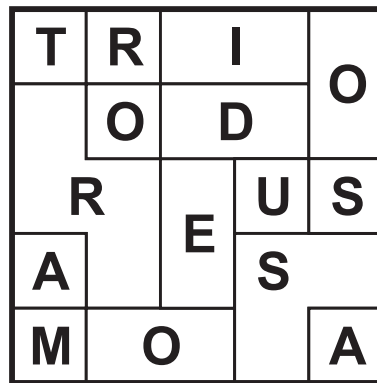Maximum score: 300+?? points

20, (20+20), (20+20+20),
30, (30+30), (30+30+30)

*Put all the given Latin words into the grid in a way that
each area should contain exactly one letter.*

EXAMPLE:

SOLUTION:

➜

TRIO
RODO
REUS
ARES
MOSA

TRAM RORO IDEO IDUS OSSA

ARES, IDEO, IDUS, MOSA, OSSA,
REUS, RODO, RORO, TRAM, TRIO.

TIME:

BONUS:

100, 80, 60, 40, 20 points
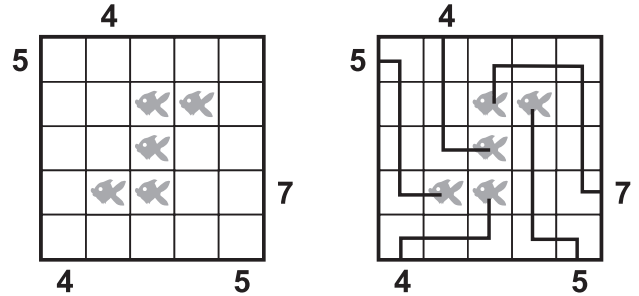
PART 5

I N N O V A T I V E

7th October, 1999
10:45 – 13:15 (150 min)
Maximum score: 1430 points

Anglers	105 points (15+30+60)
Only Three Numbers	130 points (30+45+55)
Jumping Crossword	115 points
Zigzag	115 points (20+35+60)
Half Dominoes	105 points (25+30+50)
Snake on the Triangular Field	115 points (20+40+55)
Arithmetical Progressions	100 points (40+60)
Wordsnake	115 points
Every Second Breakpoints	90 points (15+25+50)
Differences	130 points (30+45+55)
Gappy Crossword	115 points
Build a Magic Square!	125 points (25+40+60)
Rubik's Cube	70 points (15+25+30)

PUZZLE 1
(15+30+60 points)

<div style="float:right"><h1>Anglers</h1></div>

The grids represent lakes, the numbers are for anglers. The numbers show the length of their fishlines. The circles are the fish. Each angler catches one fish, and their lines have not crossed each other and always connected the centers of two adjacent squares.

PUZZLE 2
(30+45+55 points)

<div style="float:right"><h1>Only Three Numbers</h1></div>

Build a magic square (the sum of the numbers in each row, each column and each diagonal should be identical with the given number) using only three different numbers.

The sum is: 20

2			
8		4	
	1		4
	9		

| 2	5	3	10
8	5	4	3
5	1	10	4
5	9	3	3

PUZZLE 3
(115 points)

<div style="float:right"><h1>Jumping Crossword</h1></div>

Place the listed words into the puzzlegrid! The words can jump over some squares, even the first or the last, but never jump over two squares at once. The 'jumped' squares must be jumped over in the other way as well. (The spaces in the listed words do not necessary indicate jumping.)

EXAMPLE:

7: BEGIN, THE END.
4: AA, ABE, BAR, BAT, EAR, IAN, NORD.
2: AR, E, G, IO.
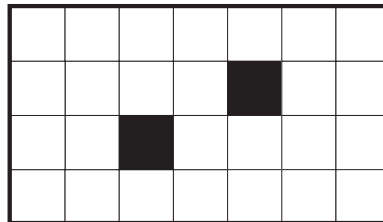
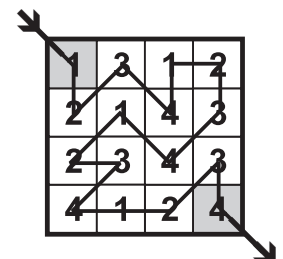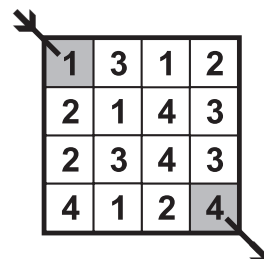| B	E	G		I		N
	A		A	■	I	O
A	R	■	B		A	R
T		H	E	E	N	D

PUZZLE 4 (20+35+60 points)

<div style="float:right"><h1>Zigzag</h1></div>

Find a way between the two gray coloured squares with a continuous zigzag line! **Rules:**
– The small parts of the zigzag connect the middle points of the neighbouring squares
– The numbers following the lines should come in 1-2-3-4-1-2-3-4-1-2-3-4 -... order
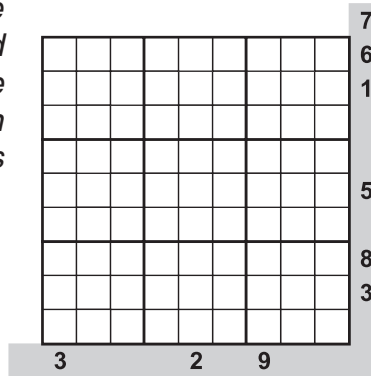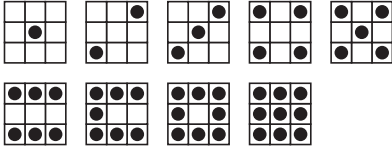– The zigzag must touch all squares.

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

PUZZLE 5 (25+30+50 points)

Half Dominoes

Put all the nine half dominoes into the puzzle grid in a way that the sum of the dots in a certain row, column and diagonal should be identical with the given numbers assigned to that certain row, column and diagonal. The pieces may not be rotated or mirrored.
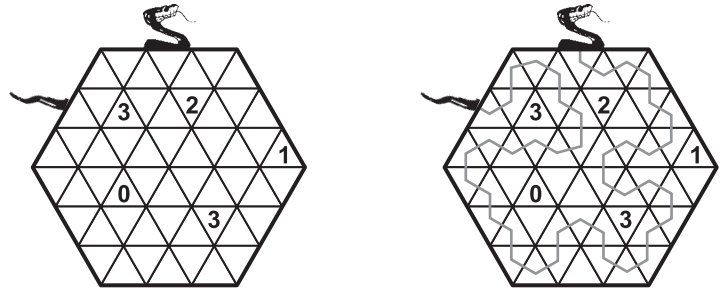

PUZZLE 6
(20+40+55 points)

Snake on the Triangular Field

Find the position of the snake in the field! The given numbers indicate how many neighboring triangles are used by the snake. (Neighboring triangles means those triangles which have common sides.) The snake cannot cross any triangle sides more than once.


PUZZLE 7 (40+60 points)

Arithmetical Progressions

Four arithmetical progressions are to be written into the four rectangles around the square filled with digits. All the digits to be written into the fields of the rectangles must be taken from that column or row of the square which corresponds to the field to be filled actually. Each digit of the square must be used, and each of them may only be used once.

In each row or column of the rectangles either one digit is to be written, or a two-digit number. Into the rectangles above and below the square, the two-digit numbers must be written vertically, while into the rectangles to the left or right of the square, the two-digit numbers must be written horizontally. In both cases, the digits of the two-digit numbers written into the rectangles must occur in the square in the same order. For example, if a row (or column) contains the digits 17628, then the number 78 can be written into the corresponding row (or column) of a rectangle, but the number 87 cannot.

The arrows next to the rectangles indicate the direction of growing of the numbers written into the rectangles. The differences between the numbers within one rectangle must be constant, although this difference may be different for the different rectangles.
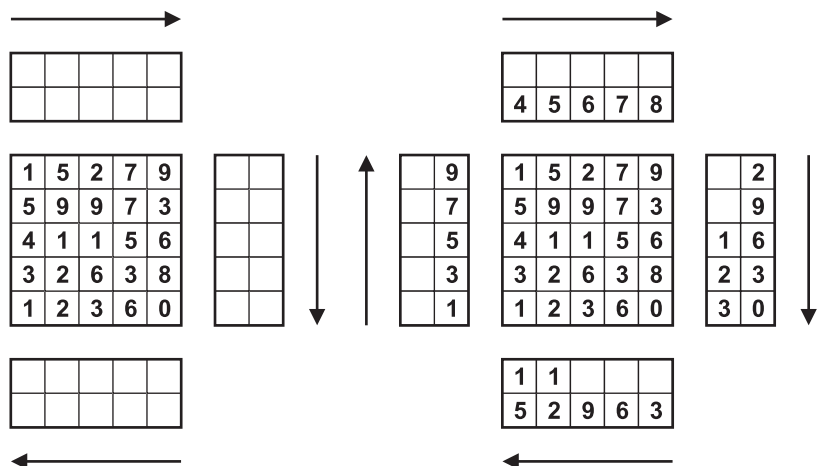
# PUZZLE 8 (115 points)

Wordsnake

Fill in the listed words into the fields of the spiral so that they constitute a word chain. For each word in the chain, the last letter coincides with the first letter of the subsequent word. If a word ends at a square marked with a black circle, the chain continues at that square, which is marked with a white circle connected to the black circle. In these cases, the last letter of the word ending at the square with the black circle is the same as the first letter of the word starting at the square marked with the white circle.

The very first and very last letters of the word chain are given at the entrance and at the center of the spiral, respectively.

AHMED   NAOMI
ASMUS   SONJA
DIANA   SUSON
KLAAS
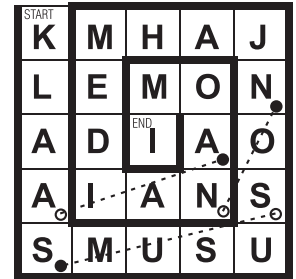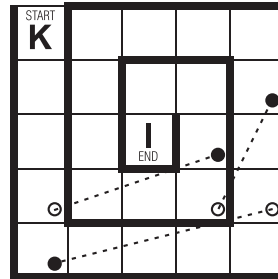
PUZZLE 9
(15+25+50 points)

Every Second Breakpoints

Draw a continuous loop (whose sections connect the centres of the neighbouring squares by a straight line) in a way that every second corner point should be in the squares containing circles. The loop cannot intersect itself and should use all the squares exactly once. Each square containing a circle should be a corner point of the loop as well.
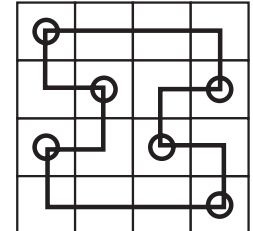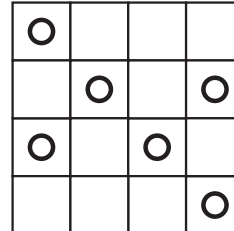
PUZZLE 10
(30+45+55 points)

Differences

Complete the grid with digits (1 to 9) in a way that the following rule should be true in the case of each arrow:

The absolute value of the difference between the first two digits being in the arrowed direction should be identical with the digit whose square contains the mentioned arrow.

PUZZLE 11 (115 points)

Gappy Crossword

1. JEAN – JOE
2. LI – ED
3. ALI – ONO
4. DI – IN
5. NOL – EL

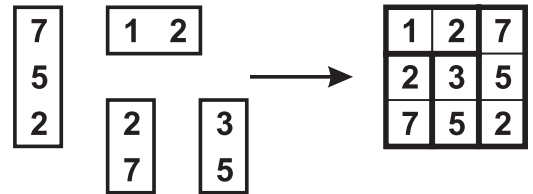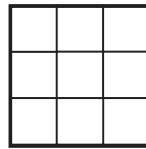*You are allowed to change the two directions, that solution will be accepted as well.*

	1	2	3	4	5
1					
2					
3					
4					
5					

|	1	2	3	4	5
1	J	E	A		N
2			L	I	
3	O			N	O
4		D	I		
5	E				L

PUZZLE 12 (25+40+60 points)

Build a Magic Square!

Use the tile set to tile the square so that its rows must be identical to its columns. You may not rotate the tiles.

7
5
2

1	2

2
7

3
5

→

1	2	7
2	3	5
7	5	2

PUZZLE 13 (15+25+30 points)

Rubik's Cube

Try to find out what kind of colour placed in the middle of the three non-visable side of the cube! Write your answers in the small grid next to the cube. Note: the placement of the coloures not the same in each time.
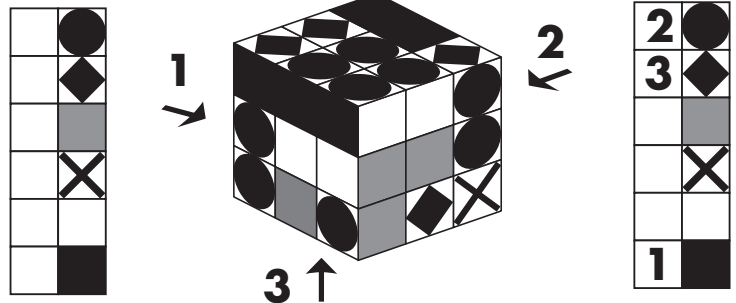
PART 7

H O N E Y   I S L A N D S

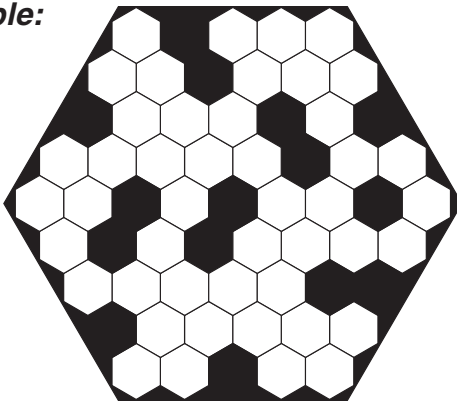7th October, 1999
15:40 – 16:15 (35 min)
Maximum score: 300+?? points
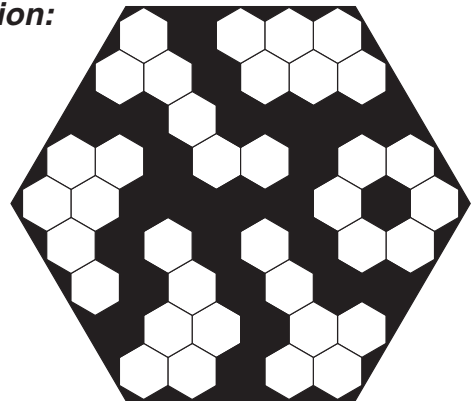
15, 15, 20, 20, 20, 25,
25, 25, 30, 30, 35, 40

There are 6 islands each consisting of 6 cells within a honeycomb. The black coloured cells must not be a part of any islands. The cells belonging to the separate islands must not be neighbouring ones.

Example:

Solution:

TIME:

BONUS:

100, 80, 60, 40, 20 points

T H E   G I A N T   O C T O P U S
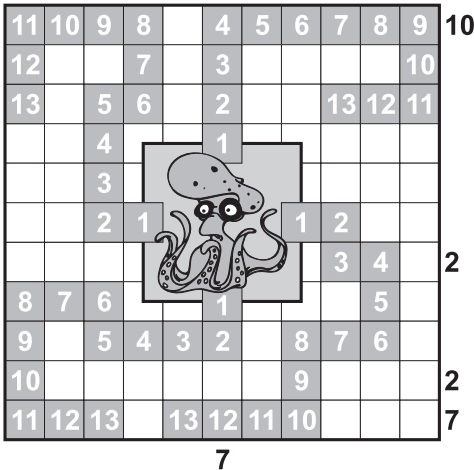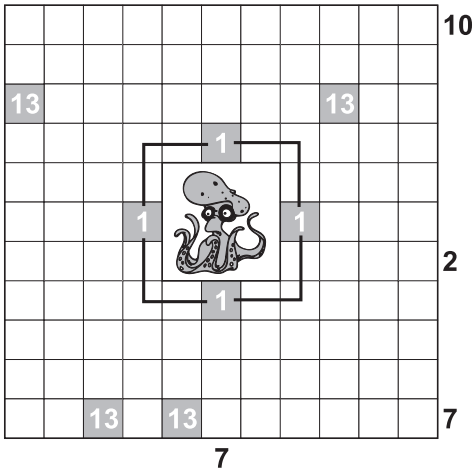
7th October, 1999

16:45 – 17:20 (35 min)

Maximum score: 320+?? points

8*40=320 points

The grid symbolises a sea where The Giant Octopus lives. He has eight tentacles, each of them consists of 27 squares. Find the position of the tentacles based on the following rules:
– each tentacles starts from a different part of the octopus' body (marked by '1') and ends in one of the squares marked by '27'
– the neighbouring squares of a square used by one of the tentacles must not be used by another tentacle
– the numbers at the end of rows and columns indicate the sum of the squares used by the tentacles, the body of the octopus is not to be counted in the given numbers (In the example the 'octopus' has got only 4 tentacles, each of length 13).

TIME:

BONUS:

100, 80, 60, 40, 20 points

PART 9

B A T T L E S H I P S

7th October, 1999

17:25 – 18:00 (35 min)

Maximum score: 300+?? points

Battleships Classic	60 points (25+35)
Battleships varia #1	60 points (25+35)
Battleships varia #2	60 points (25+35)
Battleships varia #3	60 points (25+35)
Battleships varia #4	60 points (25+35)

TIME:

BONUS:

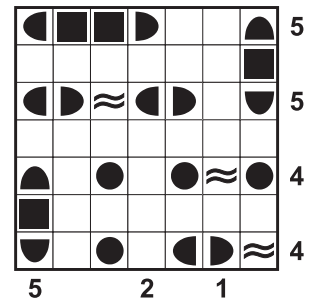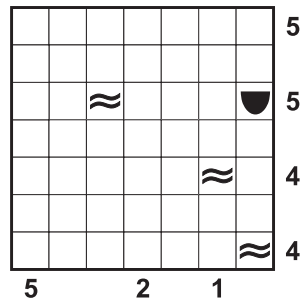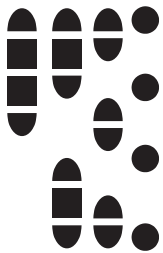**100, 80, 60, 40, 20** **points**

PUZZLE 1 (25+35 points)   Battleships Classic

Place the entire fleet in the diagram. Ships can lie horizontally or vertically, and must not touch each other, not even diagonally. The figures at the right side and along the bottom of the diagram indicate how many parts of ships can be found in that row or column.
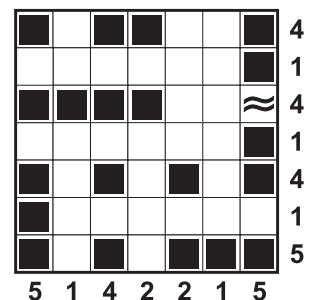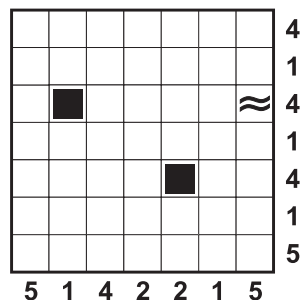

PUZZLE 2 (25+35 points)   Battleships varia #1

Place the entire fleet in the diagram. Ships can lie horizontally or vertically, and must not touch each other, not even diagonally. The figures at the right side and along the bottom of the diagram indicate how many parts of ships can be found in that row or column. Note the form of the parts of the ships: in this variation the ends of the ships are not rounded, just as in the traditional paper-and-pencil game!

PUZZLE 3 (25+35 points)   Battleships varia #2

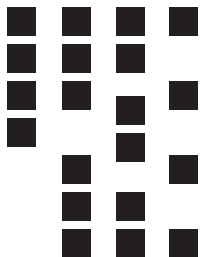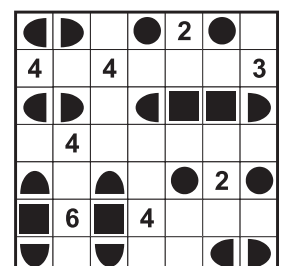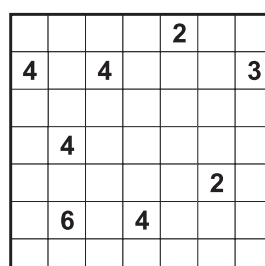*This variation is a combination of the classical Battleships and Minesweeper games. Place the entire fleet in the diagram. Ships can lie horizontally or vertically, and must not touch each other, not even diagonally. The figures in the diagram indicate the number of parts of ships that can be found in the squares adjacent to that square – horizontally, vertically or diagonally. Squares containing figures do not contain any parts of ships.*

PUZZLE 4 (25+35 points) — Battleships varia #3

This variation is a combination of the classical Battleships and Lighthouses games. Place the entire fleet in the diagram. Ships can lie horizontally or vertically, and must not touch each other, not even diagonally. The squares containing figures represent lighthouses and the figures indicate number of the parts of ships that are lit by that lighthouse horizontally or vertically, i. e. how many parts of ships are lit in the row and column of the lighthouse altogether. Ships must not touch lighthouses, not even diagonally.

PUZZLE 5 (25+35 points) — Battleships varia #4

This variation is a combination of the classical Battleships and Paint it Black games.
Place the entire fleet in the diagram. Ships can lie horizontally or vertically, and must not touch each other, not even diagonally. The figures on the left of each row and on the top of each column indicate, how many consecutive squares occupied in that line by the ships. The consecution of the figures corresponds to the order of the appearance of the battleship fragments in that column or row.

M I X

8th October, 1999
9:00 – 11:30 (150 min)
Maximum score: 1430 points

ABC Line	125 points (25+40+60)
Easy as ABC(D)	90 points (15+30+45)
Balanced	110 points (25+35+50)
The Key Is Closed	85 points (30+55)
Starting Points	135 points (25+45+65)
Area Occupation	95 points (20+30+45)
What's Your Name?	125 points (25+45+55)
Paint Hexagonally	100 points (20+30+50)
Pentomino	115 points (20+35+60)
Hidden Capitals	80 points
Darts	60 points (10+20+30)
Skycrapers	115 points (20+35+60)
Champion's League	30 points (15+15)
Number Pyramide	65 points (20+45)
Loops by Number	90 points (20+30+40)

PUZZLE 1
(15+30+60 points)

**ABC Line**

Draw a line starting from the letter 'A' in the grey square, using all the squares exactly once and ending in the letter 'C' in the grey square. Along the line the order of the letters must be ABCABC…ABC. The line must not touch and cross itself.
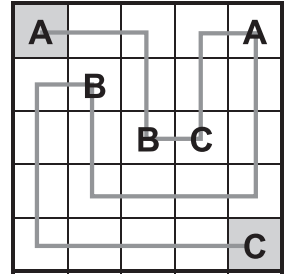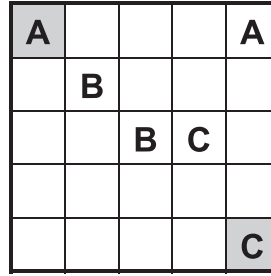
PUZZLE 2
(15+30+45 points)

**Easy as ABC(D)**

Fill in the letters A, B, C and D in the diagram. Each letter occurs once in each of the rows and columns. ?? (in the example: ??) cells will remain empty. The letters outside the diagram are the letters you come across first from that direction.
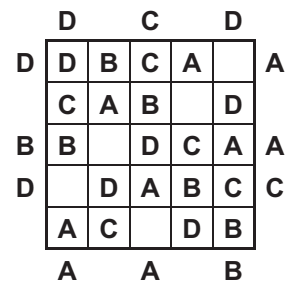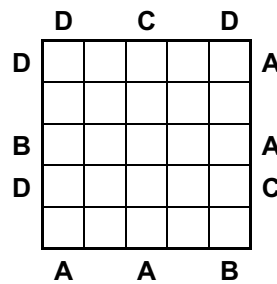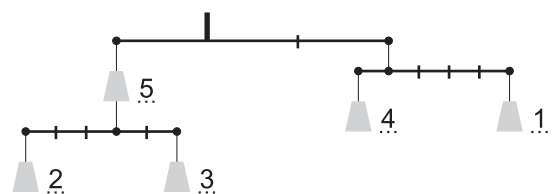

PUZZLE 3
(25+35+50 points)

Balance

Each drawing symbolises a scales. Give value the grey coloured weights so as to balance the scales. You have to use all the whole numbers of the range given in the brackets. Each weight must be used exactly once. The ropes and bars have no weight.
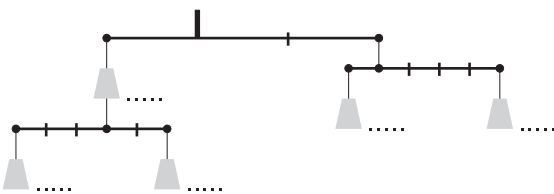
(1~5)

PUZZLE 4
(30+55 points)

The Key Is Closed

Place all the given words into the grid. The words are separated by a continuous thick line, starting from and ending in the border of the grid. Find and put down the hidden solution on the dotted line. There must not be two neighbouring squares within one word not crossed by another word.
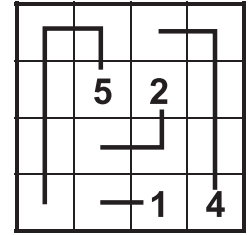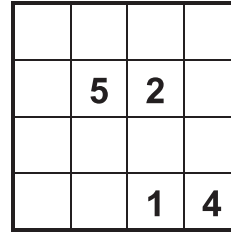
2: AR, AT, CM, CR, ER, RO, VI.
3: DON, ETA, RAD, RAY, RIO.
5: KEVIN, MARIO.
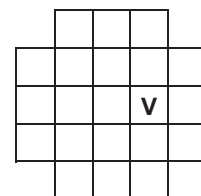
KEY: _KEY_

PUZZLE 5
## (25+45+65 points)

Starting Points

Draw continuous lines starting from the squares containing digits. These digits show the length of the lines. The line must not touch and cross itself.

	5	2	
		1	4

PUZZLE 6
(20+30+45 points)

Area Occupation

Write digits into the empty circles in a way that each digit must be a part of a contiguous area consisting of as many squares as the digit itself. Two areas of the same size may touch each other only diagonally.
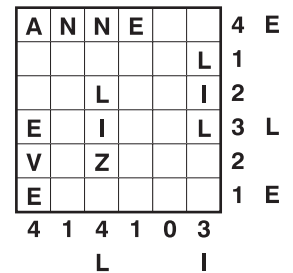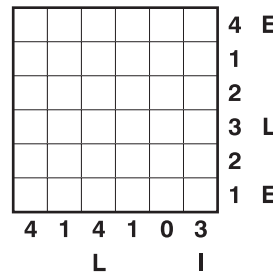
	2	1	
	1		3
	3	2	

2	2	1	3
4	4	4	3
3	1	4	3
3	3	2	2
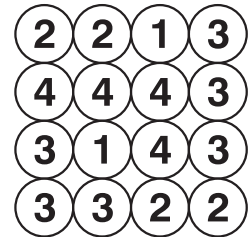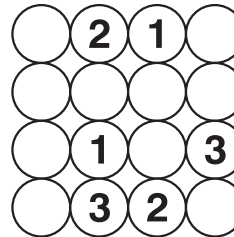
PUZZLE 7
(25+45+55 points)
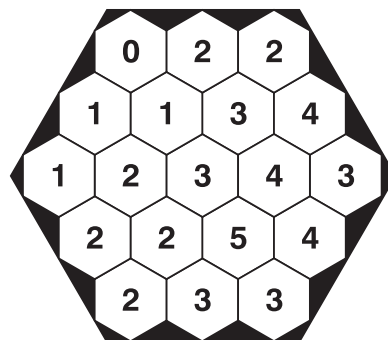
What's Your Name?

Place the listed names into the grid in a way that the squares used by the names must not be neighbouring – not even diagonally – with squares used by another names. The numbers outside the grid show how many letters must be in the certain row or column. There are some letters after the mentioned numbers, too. These letters must be placed minimum once in that row or column.
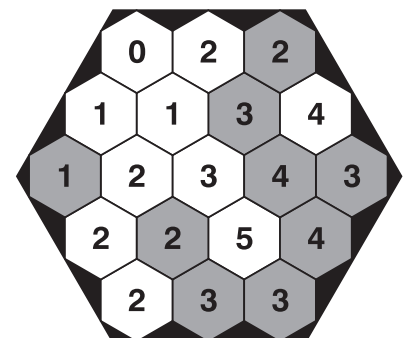
Example: EVE, LIZ, LIL, ANNE

						4 E
						1
						2
						3 L
						2
						1 E

4 1 4 1 0 3
L   I

A	N	N	E			4 E
					L	1
		L			I	2
E		I		L		3 L
V		Z				2
E						1 E

4 1 4 1 0 3
L   I

PUZZLE 8
(25+45+55 points)

Paint Hexagonally

Colour some honeycombs in a way that the digit in a cell shows how many cells must be greyed around the cell, including itself.

PUZZLE 9
(20+35+60 points)

Pentomino

Divide the grid into parts consisting of five squares in a way that:

– the sum of the digits must be 10 within each area
– the shape of each area must be different. Any of the areas must not be transformed into another not even by mirroring within one grid.

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

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

PUZZLE 10 (80 points)

Hidden Capitals

There are letters of 20 capitals' names hidden in the grid, exactly one name in each row and in each column. There are 30 capitals in the list, but 10 of them are superfluous. Write down all the hidden capitals' names in the empty grids to the appropriate row or column. Each letter is part of one of the capital's name (horizontally or vertically) and is used exactly once.

Example:

O	B	O	R	Q
Z	N	I	D	I
S	U	L	R	A
N	G	L	N	R
E	X	B	G	M

O	B	O	R	Q
Z	N	I	D	I
S	U	L	R	A
N	G	L	N	R
E	X	B	G	M

R	O	
I	N	D
U	S	A
N	L	
M	E	X

N	G	B	G	I
Z	B	O	R	R
	L		Q	

PUZZLE 11
(10+20+30 points)

Darts

The number of the arrows show how many hits must be on the field so as to the sum of the hit numbers is 100. Mark these numbers.
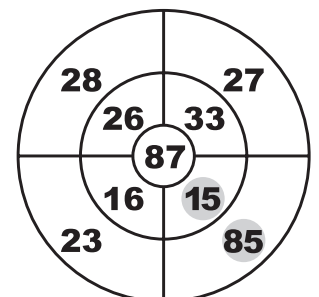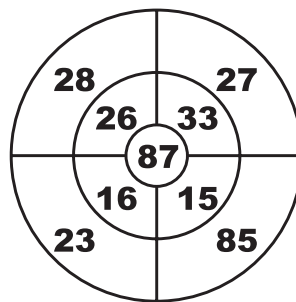
PUZZLE 12
(20+35+60 points)

Skycrapers

Each grid symbolises a group of skyscrapers. Each row and column should contain skyscrapers of different heights. The numbers in the brackets determine the minimum and the maximum of the number of the floors. The numbers outside the grid indicate how many skyscrapers are visible from that direction.

	3	1	2	2	
2					3
2					1
1					3
3					2
	2	3	1	2	

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

PUZZLE 13 (15+15 points)

Champions' League

Find out how each of the soccer teams scored a goal. For both teams, their attack ending in a goal started from their goalkeeper, and after all the players of that team have touched the ball, the last player kicked the ball to the goal of the opponent. The ball always moves either horizontally, or vertically, or diagonally to any directions, and never touches an opponent. The goal is only valid if the line starting from the last player ends in the opponent's goal.
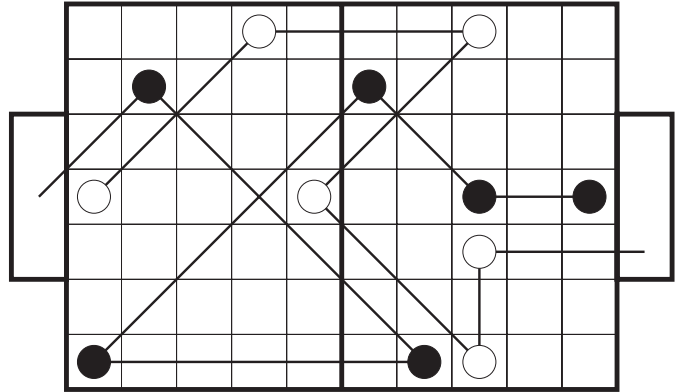
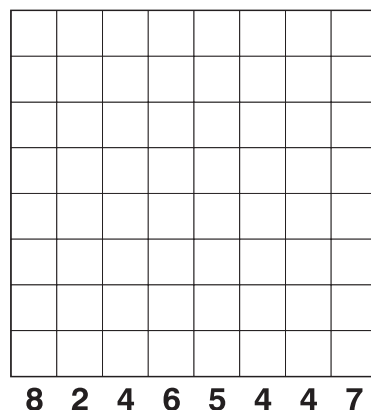## PUZZLE 14 (20+45 points)

Number Pyramide
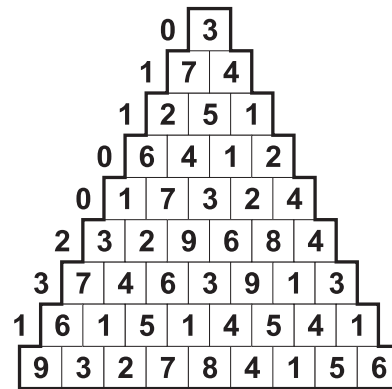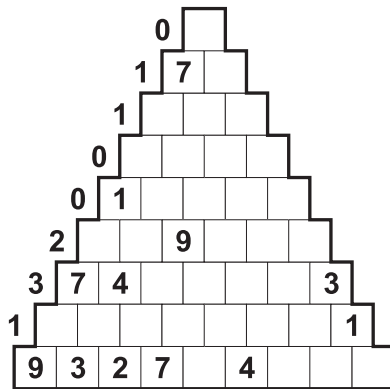
Fill the empty squares with digits (1 to 9) in a way that in the bottom row each digit should be represented exactly once. From the second row from the bottom, each digit must be either the sum or the difference of the two digits can be found immediately below that certain digit. The numbers outside the grid show how many digits must be calculated by addition.
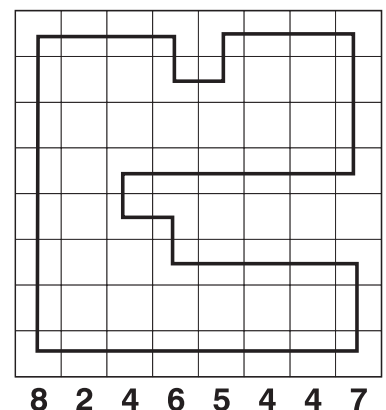
PUZZLE 15 (20+30+40 points)

Loops by Numbers

Draw a continuous loop consisting of straight sections into the grid in a way that the loop must not touch and cross itself. The numbers outside the grid show how many squares are used in that row or column by the loop.