

SCHEDULE

13TH WPC

Tuesday, October 12th

- all day Arrival
- 19.00. Welcome party with introductions of all the teams
- 20.00. Dinner
- 21.00. Happy Hour in hotel "Ambasador"

Wednesday, October 13th

- 7.30. - 9.00. Breakfast in the restaurant
- 10.00. - 18.30. Excursion
- 20.00. - 21.00. Dinner in hotel
- 21.00. Puzzle instructions for Thursday

Thursday, October 14th

- 7.30. - 9.00. Breakfast in the restaurant
- 9.00. - 10.00. Photo session
- 10.00. - 12.30. Puzzle competition parts 1 and 2
- 10.15. General assembly WPF
- 12.30. - 14.30. Lunch
- 14.30. - 18.00. Puzzle competition parts 3, 4, 5 and 6
- 19.00. - 21.00. Dinner
- 21.00. Puzzle instructions for Friday

Friday, October 15th

- 7.30. - 9.00. Breakfast in the restaurant
- 9.30. - 12.30. Puzzle competition parts 7, 8 and 9
- 9.45. General assembly WPF
- 12.30. - 14.30. Lunch
- 14.30. - 18.00. Puzzle competition parts 10, 11 and 12
- 19.00. - 21.00. Dinner
- 21.00. Happy Hour

Saturday, October 16th

- 7.30. - 9.00. Breakfast in the restaurant
- 9.00. - 10.00. Puzzle instructions for final competition
- 10.00. - 13.00. Individual finals
- 13.30. - 15.30. Lunch
- 15.30. - 19.00. Free time
- 19.00. Farewell dinner party and victory ceremony in hotel "Kvarner"

Sunday, October 17th

- 7.30. - 9.00. Breakfast in the restaurant
- all day Departure

CLASSICAL PUZZLES - individual

PART 1

Thursday, October 14th, 10.00. - 11.31.

PUZZLE 1 - PAINT BY NUMBERS

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.

2	1	1	2	1	4	2	1	1
4								
1	1							
1								
1	1							
2	2							

2	1	1	2	1	4	2	1	1
4	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-
2	2	-	-	-	-	-	-	-

20
POINTS

PUZZLE 2 - DOMINO HUNT

We have placed a complete domino double 9-set in the grid. However, the sides of the dominoes have been removed and the spots have been replaced by numbers.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 so that it becomes clear exactly how the dominoes are positioned?

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

0-0
0-1 1-1
0-2 1-2 2-2

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

25
POINTS

PUZZLE 3 - TENTS

Locate the tents in the grid. Each tree is connected to exactly one tent, found in a horizontally or vertically adjacent square. Tents do not touch each other, not even diagonally. The numbers outside the grid reveal the total number of tents in the corresponding row or column.

		2
		0
		2
		0
2	0	1

	2
	0
	2
	0
2	0

10
POINTS

PUZZLE 4 - CROSS SUMS

The sum of the digits for each number to be filled in is equal to the number in the corresponding black cell. The "0" is not used and same digit can never appear more than once in the same group.

8	3
14	
4	

8	3
14	
4	

25
POINTS

PUZZLE 5 - NUMBER PLACE

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

			2
	4		
	1		
		3	

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

25
POINTS

PUZZLE 6 - SKYSCRAPERS

The grid symbolises a group of skyscrapers. Each row and column contains skyscrapers of different heights (1~6 in first puzzle and 1~7 in second). The numbers outside the grid indicate how many skyscrapers are visible from that direction.

5	3	1
4		

(1~5)

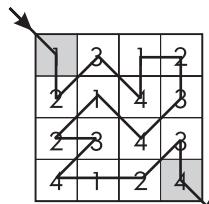
5	3	1
1	4	2
2	3	4
3	1	5
4	5	3
5	2	1

7+9
POINTS

PUZZLE 7 - ZIGZAG

Find a way between the two gray coloured squares with a continuous zigzag line! 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

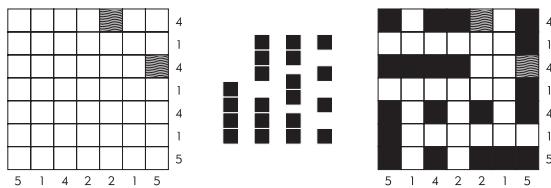


8
POINTS

PART 1

PUZZLE 8 - BATTLESHIPS

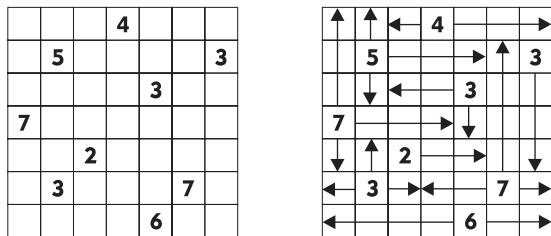
Place the entire fleet in the diagram. Ships can be lying horizontally or vertically, and must not touch, not even diagonally. The numbers at the side and along the bottom of the diagram tell you how many parts of vessels can be found in that row or column. In this variation the ends of the ships are not rounded.



10
POINTS

PUZZLE 9 - ALONG THE LINES

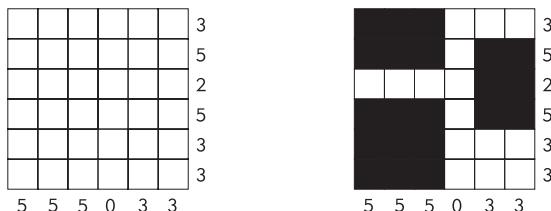
From each numbered square must be drawn one or several straight lines in horizontal and/or vertical order, which altogether pass through as many squares as indicated by the corresponding number. The numbered square itself is not counted. It is at the same time important that the lines don't intersect or overlap and that finally no initially empty square remains unpassed.



8
POINTS

PUZZLE 10 - RADAR

All clouds are rectangular or square and at least two squares wide and two squares long. The clouds must not touch, not even diagonally. The numbers outside the grid indicate how many parts of the clouds can be found in each row or column.

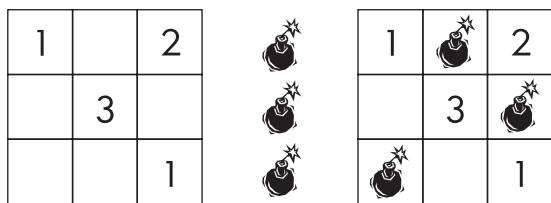


25
POINTS

PUZZLE 11 - MINESWEEPER

There are 13 mines hidden in each diagram. The figures in the diagrams 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.

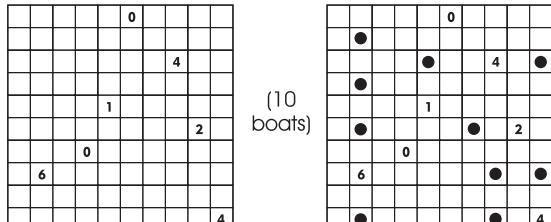
Note: only solutions with 13 mines will be accepted.



4+6
POINTS

PUZZLE 12 - LIGHTHOUSES

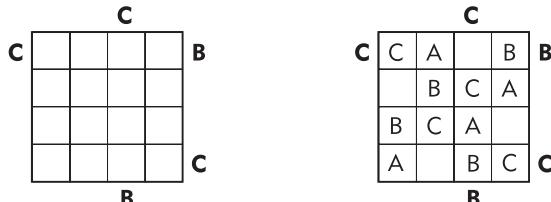
In the sea, represented by a 13x13 grid, there are 13 lighthouses, each one lighting up a complete horizontal and a complete vertical strip. Thirteen boats, the size of one square, are all lit up by at least one lighthouse. The number on each lighthouse represents the number of boats which the lighthouse has in its beams of light. None of the boats touch a lighthouse or another boat, not even diagonally. Find out the position of all 13 boats.



8
POINTS

PUZZLE 13 - EASY AS ABC

Put the letters A, B and C in the diagram so that each letter appears exactly once in every row and column. Four squares in each row and each column remain empty. The letters around the diagram indicate the first letter that can be found by reading the appropriate row or column, beginning at the outside letter.



10
POINTS

**MAXIMUM
200**
POINTS

ASSORTED PUZZLES - team

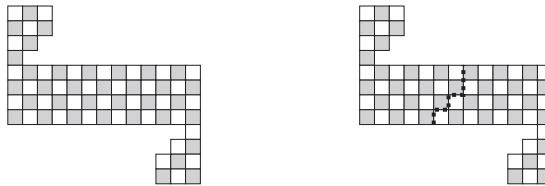
PART 2

Thursday, October 14th, 11.44. - 12.23.

PUZZLE 1 - CHESS BOARD

Cut each shape in two pieces along the sides of the squares. As a result you will have two shapes, which connected together will form a chess board (8x8).

Black square represents a hole in the shape.



**5+8
POINTS**

PUZZLE 2 - FENCES

Connect dots (only horizontally and/or vertically) and create a single unbroken loop. A number in a square formed by the four dots means how many sides you should draw. The lines don't necessarily need to touch all of the dots and never touching or crossing itself.



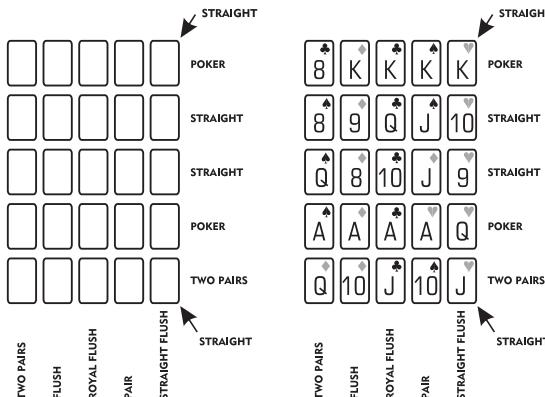
**15
POINTS**

PUZZLE 3 - 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:

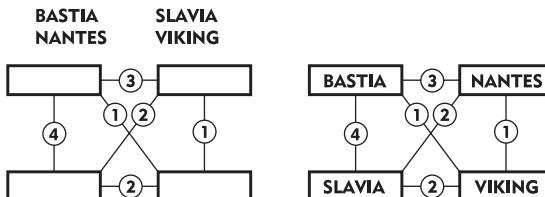
ONE PAIR: K, K; TWO PAIRS: K, K, Q, Q; DRILL: K, K, K; STRAIGHT: A, 8, 9, 10, J; FLUSH: ♥ ♥ ♥ ♥ ♥; FULL HOUSE: DRILL+PAIR; POKER: A, A, A, A; STRAIGHT FLUSH: ♣ (8, 9, 10, J, Q); ROYAL FLUSH: ♠ (10, J, Q, K, A)



**15
POINTS**

PUZZLE 4 - COMMON LETTERS

Your task is to place the names of thirteen football clubs from the attached list into thirteen frames. The connecting lines between the individual frame have numbers. Each number states the total of letters that two neighbouring football clubs have in common. Letters that appear more than once in a word count individually as independent symbols. Find the correct position in the diagram for each given football club.



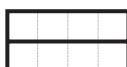
**30
POINTS**

PUZZLE 5 - NUMBER TABLES

Divide each row of digits into three numbers and place them into the grid so that every digit is part of one vertical and one horizontal number.

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

**5+7
POINTS**



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

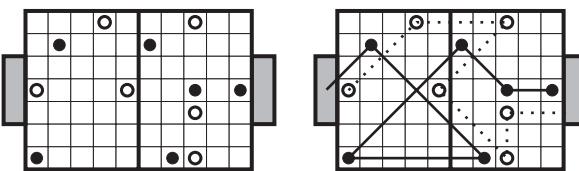
2	5	4	7
1	6	3	8

PUZZLE 6 - FOOTBALL

Football is one of the world's most popular and widespread sports. In the diagram is a football pitch. Your task is to position the players for the scoring of two goals: one goal for the white team, and one goal for the black team. The goalkeeper kicks off from his goal to one of his teammates, who passes the ball to a further player and so on. All the players in a team should touch the ball. At the same time the following rules should not be broken:
 1. the path of the ball from one player to another should be direct and no other player should stand in its way. Indicate this path with an arrow from one player to another;

2. a player can only pass the ball in one of the following eight directions: forwards (up), backwards (down), to the left or right, or diagonally (but only at a 45 degree angle);

3. each player can only have one contact with the ball.

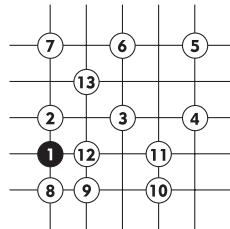
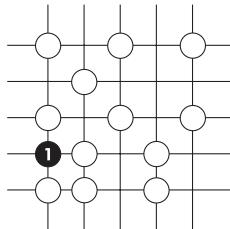


**15
POINTS**

PUZZLE 7 - HIROIMONO

"Hiroimono", which means picking up something, is one of the Japanese traditional games. 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:

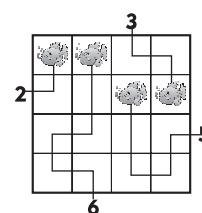
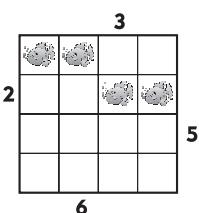
1. You should go along lines horizontally or vertically.
2. You can change directions when you pick up a white stone. But you can't return (make "U" turn).
3. You must pick up the white stones which you came across. If you pass the place where you have picked up a white once, you can't change directions anymore because there is no stone there anymore.



10 POINTS

PUZZLE 8 - OUT FISHING

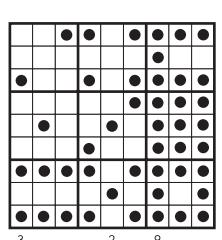
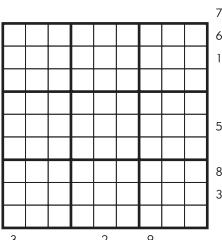
Connect each number with a fish. Each number means the number of squares you must pass through to get a fish. A square with a fish is counted. The lines don't intersect or overlap.



25 POINTS

PUZZLE 9 - HALF DOMINOES

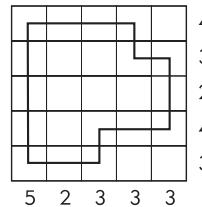
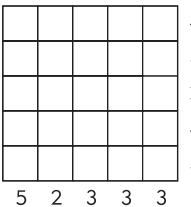
Put all the nine half dominoes into the puzzle grid in a way the sum of the dots in a certain row, column and diagonal should be identical with the given numbers assigned that certain row, column and diagonal. The pieces may not be rotated or mirrored.



15 POINTS

PUZZLE 10 - LOOPS BY NUMBER

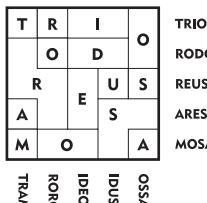
Draw a continuous loop consisting of straight sections into the grid in a way that the loop must not touch and cross itself. The numbers outside the grid show how many squares are used in that row or column by the loop.



10 POINTS

PUZZLE 11 - CRACK IT ON!

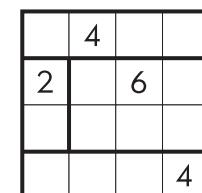
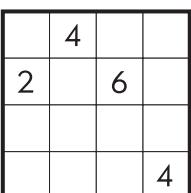
Put all the given Latin words into the grid in a way that each area contain exactly one letter.



3x5 POINTS

PUZZLE 12 - RECTANGLES

Divide the grid into regions so that each rectangle contains exactly one number, and so that each number represents the number of squares of its corresponding rectangle.



15 POINTS

PUZZLE 13 - COMIC STORY

Put the pictures in the right order.

10 POINTS

MAXIMUM
200 POINTS

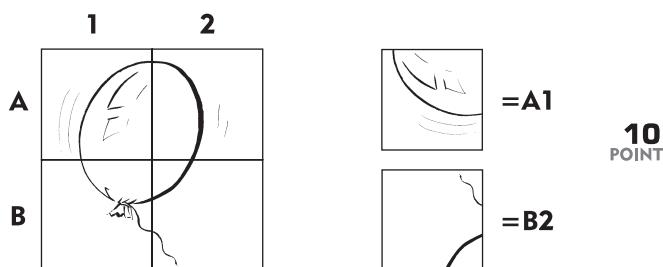
MEDLEY-individual

PART 3

Thursday, October 14th, 14.30. - 14.56.

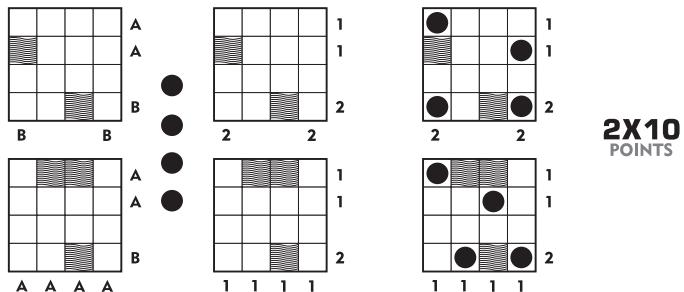
PUZZLE 1 - STATUE OF LIBERTY

Find coordinates of all nine fragments on the large picture. The fragments can be rotated.



PUZZLE 2 - CLASSIC BATTLESHIPS

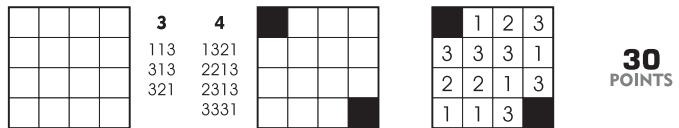
Replace all the letters with corresponding numbers from the puzzle no. 1. Place the entire fleet in the diagram. Ships can be lying horizontally or vertically, and must not touch, not even diagonally. The numbers at the side and along the bottom of the diagram tell you how many parts of vessels can be found in that row or column.



PUZZLE 3 - ONLY SOME NUMBERS

Place black squares in the grid, only on those positions where are parts of ships on both grids from the puzzle no. 2. Then place all the numbers from the list in the grid.

Note: One number is missing on the list!



PUZZLE 4 - COMMON TOUCH

The missing number from puzzle no. 3 indicates ordinal numbers of WPC's from the list that share an unusual property. Other WPC's on the list not share that unusual property.

Pick one of the four WPC's from the Answer List at the bottom of the page that shares the same property as the chosen WPC's from the list.

Note: You will get 40 points only if all previous puzzles are solved correctly!

Example: Surnames of famous people.

YES/NO	YES/NO	YES/NO	ANSWER LIST:	40 POINTS
1 WILLIAMS		1 WILLIAMS	EASTWOOD	
2 FITTIPALDI		2 FITTIPALDI	PUCCINI ✓	
3 CARRERAS		3 CARRERAS		
4 ROOSEVELT		4 ROOSEVELT		
5 CHURCHILL		5 CHURCHILL	SCHWARZENEGGER	

MAXIMUM
100 POINTS

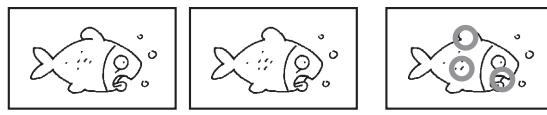
MEMORIES, MEMORIES... - individual

PART 4

Thursday, October 14th, 15.09. - 16.40.

PUZZLE 1 - FIND THE DIFFERENCES

Circle 13 parts of the lower picture that are different from the same parts in the upper one.



13x1
POINTS

PUZZLE 2 - HIDDEN CARS

The letters of 26 cars are hidden in the grid, exactly one car in each row and column. Write all the hidden cars in the empty grids right and below the appropriate row or column. Each letter is part of one of the cars and is used exactly once. **Note:** be careful, in the list there are 4 more cars than you need.

E	D	N	L		
Z	E	C	P		
B	L	U	P		
I	T	K	J		

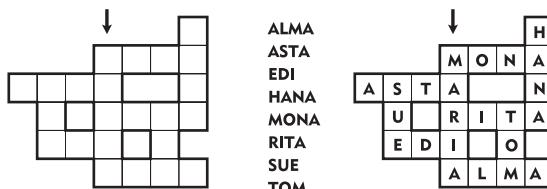
UK	CZ		
NL	JP		
DE	PL		
BE	IT		

25
POINTS

E	D	N	L	N	L
Z	E	C	P	C	Z
B	L	U	P	P	L
I	T	K	J	I	T

PUZZLE 3 - SECRET NAME

Place Italian names in the grid. If done correctly another Italian name will show up in the central column.



10
POINTS

PUZZLE 4 - I CROSSWORD

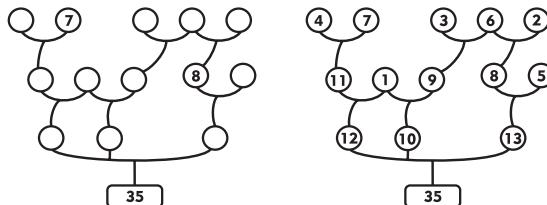
The words from the list all fit in the grid. Here you can see where the "I" has to be filled in. But be careful: an "I" can also be a black square!

I							I	D	E	S	T
I		I	I				N	I	K	I	
	I						T	A	I	N	O
	I						E	N		U	X
	I						R	A	I	S	A

20
POINTS

PUZZLE 5 - FIGURE TREE

Insert the numbers 1 to 13 in the circles so that each circle's number is equal to the sum of the numbers in the circles into which it branches off. **Note:** the number on the base of the tree is not given.



10
POINTS

PUZZLE 6 - TENNIS

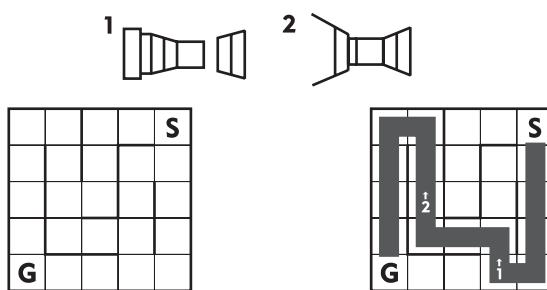
The list contains the names of twenty one female tennis players. Fill them in on the diagram (horizontal or vertical). The diagram already contains one letter from each name, which is used for that name only. Every name crosses with one or more other names.



15
POINTS

PUZZLE 7 - 3D DUNGEON

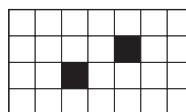
We entered the dungeon at the square with S (=Start) and went through it. We took 13 pictures (in the example: 2) on our way to the square with F (=Finish), facing toward the way we're going. We took them in numerical order. Try to find the route we took from S to F. Make sure that you must not pass any square in your route more than once. In every row and every column was taken exactly one picture. In the end 14 squares remain unused.



20
POINTS

PUZZLE 8 - JUMPING CROSSWORD

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.



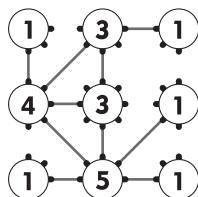
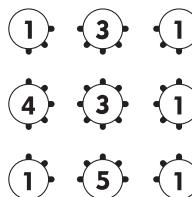
7:BEGIN, THE END
4:AA, ABE, BAR, BAT,
EAR, IAN, NORD
2:AR, E, G, IO

B	E	G	I	N
A	A		I	O
A	R	B	A	R
T	H	E	E	N

15 POINTS

PUZZLE 9 - SPOKES

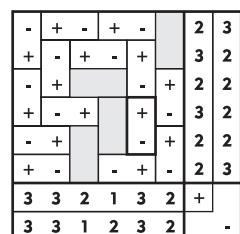
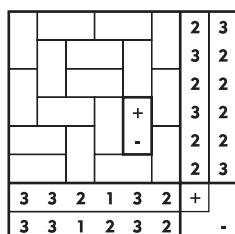
Draw spokes connecting neighbouring hubs, horizontally, vertically, and diagonally. The number in each hub indicates the number of spokes that are connected to that hub. All hubs are interconnected, and spokes cannot intersect.



6+8 POINTS

PUZZLE 10 - MAGNETS

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.

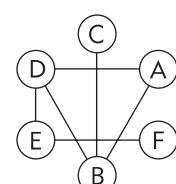
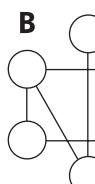
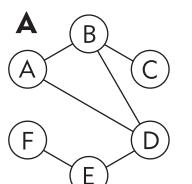


7+9 POINTS

PUZZLE 11 - ELASTIC BANDS

Six pegs are placed in a circle the numbers of a clock. These pegs are connected to each other bands. When you move a peg, the bands that are connected to it stretch or shrink depending on where the other end is connected. Figure A shows the original position of the pegs and their connections. After moving some or all pegs to a new position, the elastic network looked like figure B. What are the positions of the letters A~M?

(A~F)

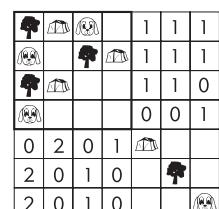
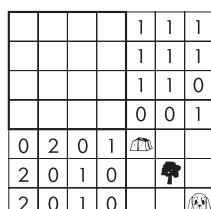


6+8 POINTS

Solution:

PUZZLE 12 - TREES TENTS AND DOGS

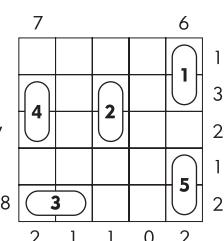
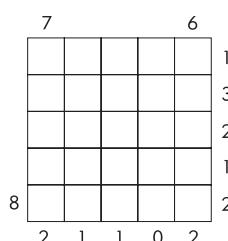
There are sixteen tents (⛺), trees (🌳) and dogs (🐶) in the grid. The series of three symbols can lie horizontally, vertically or "around the corner", but the tree is always in the middle. Same symbols do not touch each other, not even diagonally. The numbers outside the grid indicate the number of trees, tents and dogs in the corresponding row or column.



14 POINTS

PUZZLE 13 - ARCHIPELAGO

The grid represents sea with 10 (un)inhabited islands (size 1x3) which are (un)inhabited by different number of inhabitants (from 0 to 9). The numbers right and below indicate number of islands in corresponding row (or column), and the inhabitants on the island in corresponding row or column. Find the position of islands and their respective number of inhabitants. The islands don't touch each other, not even diagonally.



14 POINTS

MAXIMUM
200 POINTS

SPRINT - individual

PART 5

Thursday, October 14th, 16.53. - 17.32.

PUZZLE 1 - LUCKY THIRTEEN

Insert numbers 1-9 in empty fields of each first twelve squares. The result of all mathematical operations within a square must correspond with the number on top of that square. The numbers in the grey fields are then transferred to thirteenth square exactly in the same position. Fill in the white fields symbols of mathematical operations in such a way to have as a result 13 in all rows and columns. Each of four mathematical operations must be used at least once.

Note: In example there is no correspondence with number on the top of the square and results of mathematical operations.

13x6
POINTS
+BONUS

Example: "Lucky Five" with numbers 1, 2, 3, 4

1

	x		=	8
+		:		
	-		=	2
=			=	
5		4		

2

	-		=	1
:				
	x		=	2
=			=	
4		5		

1

2	x	4	=	8
+		:		
3	-	1	=	2
=			=	
5		4		

2

4	-	3	=	1
:				
1	x	2	=	2
=			=	
4		5		

3

	x		=	3
+		-		
	-		=	2
=			=	
5		1		

4

	+		=	7
-		:		
	x		=	2
=			=	
1		4		

3

1	x	3	=	3
+		-		
4	-	2	=	2
=			=	
5		1		

4

3	+	4	=	7
-		:		
2	x	1	=	2
=			=	
1		4		

5

			=	6
			=	3
=			=	
6		3		

5

2	x	3	=	6
+		:		
4	-	1	=	3
=			=	
6		3		

Bonus: 22, 17, 13, 9, 5.

CARD COMPOSITION - team

PART 6

Thursday, October 14th, 17.45. - 18.11.

PUZZLE 1 - MISSING TRIO

Out of a 52 cards set, three cards are missing in the grid. Beginning with a square, the cards are placed in order: A, 2, 3, 4, 5, 6, 7, 8, 9, 10, J, Q, K in one color, then in second, third and fourth color. Placing of cards goes horizontally or vertically. The numbers left and below indicate sum of the values of colours in these rows and columns ($\spadesuit=1$, $\diamondsuit=2$, $\heartsuit=3$, $\clubsuit=4$), while the numbers above and right indicate sum of values of cards in these rows and columns (J, Q, K, and A = 1, and other cards according to the number on the card).

3x26
POINTS
+BONUS

6	7	5
8		
10		
6		A
12	6	6

5

6	7	5
8	A♣	3♦
10	2♣	A♥
6	3♣	A♠
12	6	6

5

6

6



Bonus: 26, 19, 13, 8, 4.

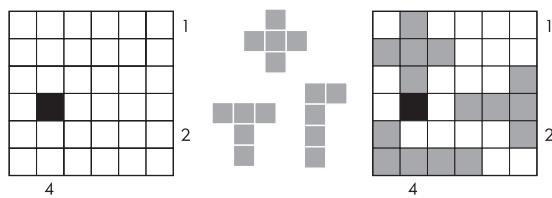
PENTOMINOES & ARROWS - individual

PART 7

Friday, October 15th, 9.30. - 11.01.

PUZZLE 1 - STANDARD PENTOMINO

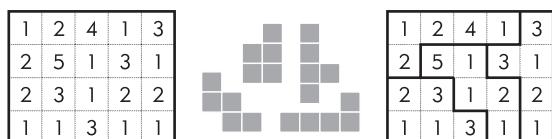
Place the given pentominoes into the diagram so that they don't overlap black cells and every number outside the diagram shows the number of pentomino parts in the corresponding row or column. The pentominoes can be rotated but not mirrored! The pieces don't touch each other, not even diagonally.



25
POINTS

PUZZLE 2 - PENTOMINOES BY NUMBERS

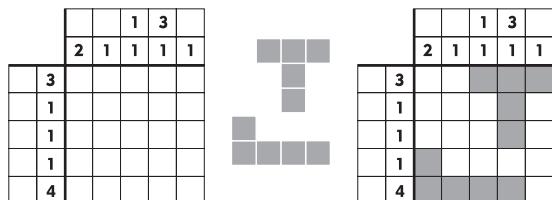
Divide the grid into consisting of five squares. The sum of the digits must be 10 within each area. The shape of each area must be different and the shape of an area must not be a same or a mirror image of another area within one grid.



15
POINTS

PUZZLE 3 - JAPANESE PENTOMINO

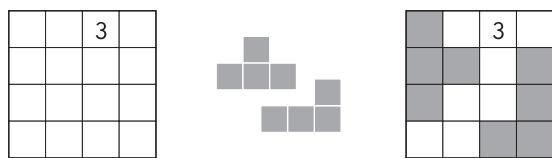
Locate each one of the 12 pentominoes into the grid. You may rotate the pentominoes, but can not reflect them. Numbers on the two sides of the grid indicate the lengths of the filled in groups of squares in the corresponding row or column, in order.



10
POINTS

PUZZLE 4 - PENTOMINO ISLANDS

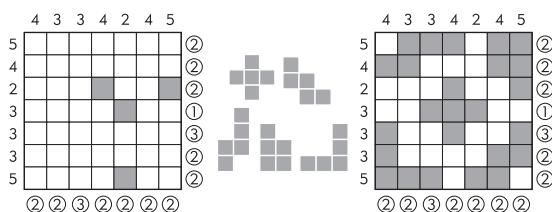
Fill the square with 13 pentominoes (islands) which are surround by the rivers. All rivers are connected but water area never come in the 2x2 squares. Each number is part of the river. All parts of the river which are surrounded exactly from 3 sides with water are already given. The pentominoes can be rotated and mirrored.



20
POINTS

PUZZLE 5 - PENTAGON

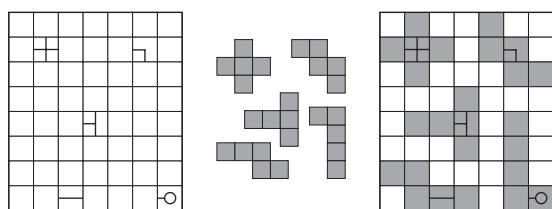
Place the 12 pieces of pentominoes (in the example: five pieces) in the diagram in such a way that they don't touch each other anywhere, not even diagonally. The numbers at the right side and along the bottom of the diagram tell you how many pentominoes can be found in that row or column. The numbers at the left side and on the top of the diagram indicate how many parts of the pieces each row or column contains. The pieces may be turned but not mirrored. A few parts of pentominoes have been placed on the gray squares.



20
POINTS

PUZZLE 6 - PENTAHOUSES

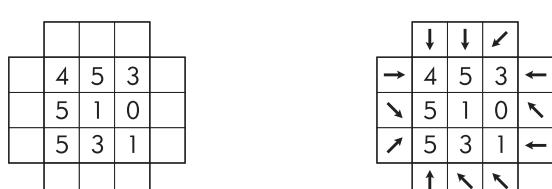
The houses have the shapes of 13 pentominoes (one pentomino is used twice). Your task is to place all the pentominoes in the network so that they do not touch one another, not even diagonally. They can be turned, but not mirror-fashion. The key for drawing the individual pentominoes consists of special symbols. Their meaning is obvious from the attached examples. Cross mean that in these squares there can be no parts of the pentominoes (the squares cannot be coloured).



10
POINTS

PUZZLE 7 - ARROWS

Draw arrows in the squares around the large square. Each square has one arrow and each arrow points at least to one number. The numbers show how many arrows point to them.



10
POINTS

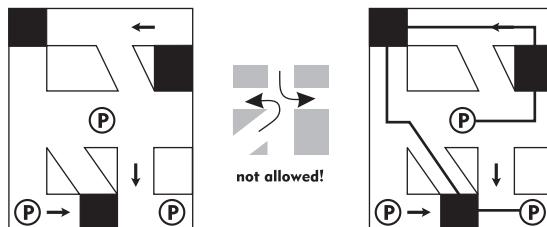
PUZZLE 8 - TOURING CROATIA

Find position of below listed words (towns in Croatia) in one of eight possible directions. Not used letters give final solution: another Croatian town.

10 POINTS

PUZZLE 9 - ONE-WAY TRAFFIC

We have indicated the positions of three parking spaces (indicated by the letter P) and seven shops (the black squares) on the map of this small town center. Some of the streets only allow one-way traffic; arrows indicate the direction of traffic, which is valid up to the first side street. Find a route that begins at one of the parking spaces, passes all the shops and ends at another parking space. Be careful: the route passes through only one oneway street! Make sure that you don't have to visit any point on your route more than once.



10 POINTS

PUZZLE 10 - ARROW MAZE

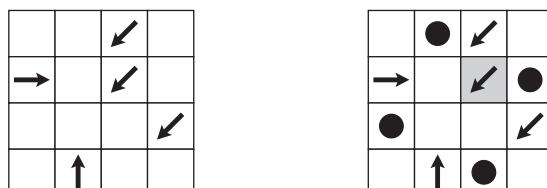
Starting in the grid with number 1, you will go in the direction an arrow shows and stop by one of the grids of that direction. You must stop by all grids according to the arrows. Try to find an answer and put the numbers from 1 to 36 in the grid in order you stop by. A few numbers have been filled in.

1 →	↓	↓	↓
→	←	10 →	↑
↓	↑	↓	←
→	↑	←	16

15 POINTS

PUZZLE 11 - MARBLES

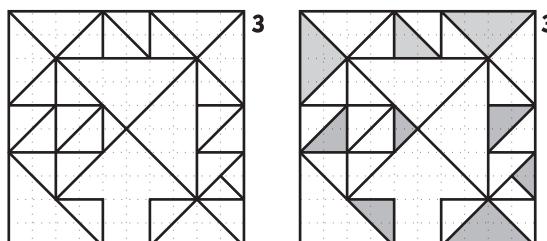
Place a marble with the size of a square in each column and each row. All arrows point at exactly one marble, except one which does not point at any marble, and each marble is pointed by an arrow once. The marbles do not touch each other, not even diagonally.



10 POINTS

PUZZLE 12 - BLACK ARROWS

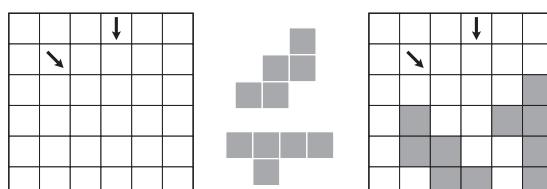
Paint nine arrows in black, eight of them being in different directions. Arrows can be of two shapes and different sizes (see picture), but the top of the arrow is always rectangular and defines the direction of the arrow. Numbers next to the diagram indicate how many painted arrows are in respective row or column. Painted arrows do not touch each other, not even in one point.



20 POINTS

PUZZLE 13 - PENTOMINOES & ARROWS

Substitute numbers with respective arrows from previous puzzles (7-12). Each of these six arrows point at exactly one square of the pentomino from puzzles no. 1 to no. 6. There are not parts of pentominoes in squares around the arrows (not even diagonally). Pentominoes do not touch each other, not even diagonally. Find positions of all 12 pentominoes in the grid. Grey squares are parts of pentominoes, while there are not pentominoes in black squares.



25 POINTS

Note: In each puzzle there are explanation which pentomino (arrow) you will need for puzzle no. 13. Pentominoes are marked with "x" in puzzles 1-5 and in puzzle no. 6 it is pentomino which is used twice. How to find arrows for puzzle no. 13? It will be our little secret until you start to solving this part.

MAXIMUM
200 POINTS

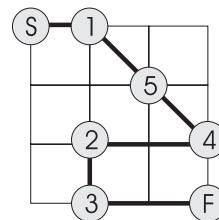
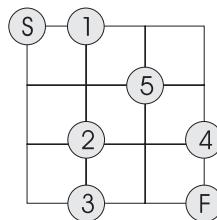
OPTIMIZERS - individual

PART 8

Saturday 15th october, 11.14. - 11.53.

PUZZLE 1 - DIAGONALLY IS EXPENSIVE!

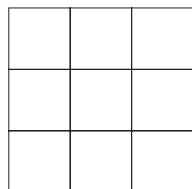
Find the way from start (S) to finish (F) with an unbroken line. Any point on the way can be passed by line only once. The line can go vertically, horizontally and diagonally (only under 45 degrees). The direction of the line can be changed only in the point with number. Your result will be the sum of all numbers through which the line has passed, but for every diagonal part of the line between two numbers you will lose 3 points.



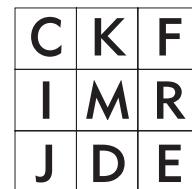
$$15 - 6 = 9 \text{ points}$$

PUZZLE 2 - GREEK GODS

Place as many names of Greek Gods as possible in the grid. For each name placed in the grid you will get 10 points.

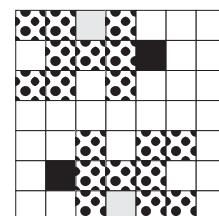
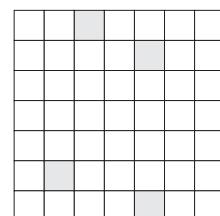
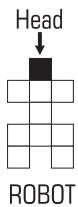


DEMI
FRED
JIM
MICK



PUZZLE 3 - ROBOTS

Place in the grid as many robots as possible. Only some of given grey squares can be head of robot. Robots can not touch each other, not even diagonally. Body of the robot can not pass over any grey square. For each robot placed in the grid you will get 10 points.



Note: Results for this three optimizers will be added. Best puzzler(s) will get 100 points, second 99, third 98, etc.

MAXIMUM
100
POINTS

INOVATIVE - individual

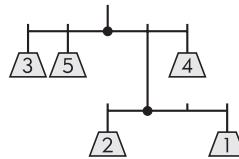
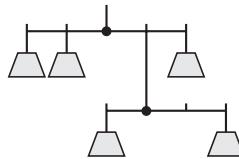
PART 9

Friday, October 15th, 12.06. - 12.32.

PUZZLE 1 - BALANCING ACT

Assign the values 1 to 13 to the weights in the diagram so that everything balances as shown. (At each fulcrum, the total torque on both sides of the balance must be the same.) Each value will be used exactly once.

Note: The number pointed at by arrow will be used in puzzle no. 13.

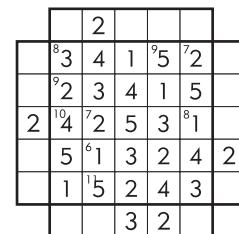
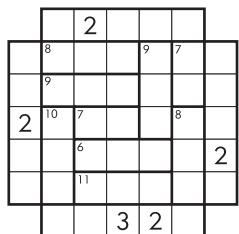


20 POINTS

PUZZLE 2 - SKYSCRAPERS VARIA

The grid symbolizes a group of skyscrapers. Each row and column contains skyscrapers of different heights (1~7). The numbers on the edge indicate how many skyscrapers are visible from that direction. Number in marked rectangles indicate sum of heights of skyscrapers in respective rectangles.

Note: The number in grey painted square will be used in puzzle no. 13.

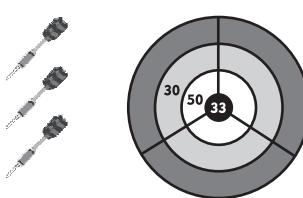
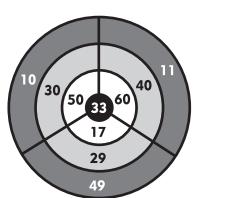


15 POINTS

PUZZLE 3 - DARTS

The numbers of the arrows show how many hits must be placed on the field so as to the sum of the hit numbers is 113. Mark these numbers!

Note: Digit which occur mostly in all solutions will be used in puzzle no. 13.



4x3 POINTS

PUZZLE 4 - ANIMALS IN EQUATIONS

Replace each animal with a number, in order to have equations correct.

Note: The number being solution in both problems will be used in puzzle no. 13.

$$\begin{array}{c} \text{duck} + \text{rabbit} = 3 \\ + + \\ \text{mouse} + \text{pig} = 7 \\ \parallel \quad \parallel \\ 4 \quad 6 \end{array}$$

$$\begin{array}{c} \text{duck} = 1 \quad \text{rabbit} = 2 \\ \text{mouse} = 3 \quad \text{pig} = 4 \end{array}$$

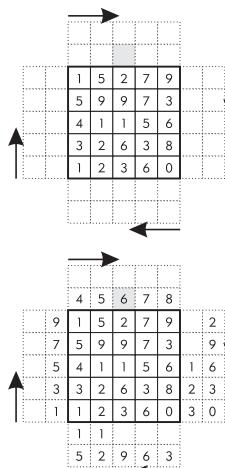
2x5 POINTS

PUZZLE 5 - ARITHMETICAL PROGRESSIONS

Four arithmetical progressions are to be written into 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 exactly once.

In each row or column of the rectangles can be written a one or 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 must occur in the square in the same order. For example, if a row (or column) contains the digits 17628, then number 78 can be written into the corresponding row (or column), but number 87 cannot. The arrows next to the rectangles indicate the direction of growing of the numbers written into the rectangles. The difference between the numbers within one rectangle must be constant, although this difference may be different for the different rectangles.

Note: The number in grey painted square will be used in puzzle no. 13.

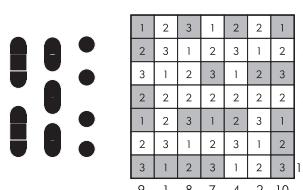
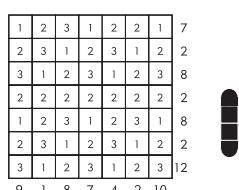


15 POINTS

PUZZLE 6 - DIGITAL BATTLESHIPS

Locate the position of the 10-ship fleet in the grid. Each segment of a ship occupies a single cell; ships are oriented either horizontally or vertically. Ships do not touch each other, not even diagonally. In this variation of Battleships, the values on the right and bottom edges of the grid reveal the sum of the numbers in each of the ship segments that appear in each respective row or column.

Note: Highest painted number in the row marked by arrow will be used in puzzle no. 13.

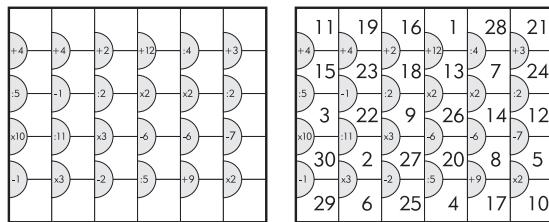


20 POINTS

PUZZLE 7 - FROM 1 TO 30

In empty patches write all the numbers from 1 to 30 so that in each column the results of the marked numerical operation between the couple of the adjoining patches agree. It means that the number in the upper patch remits to the marked mathematical operation and the result is written down to the lower patch.

Note: The number in grey painted square will be used in puzzle no. 13.

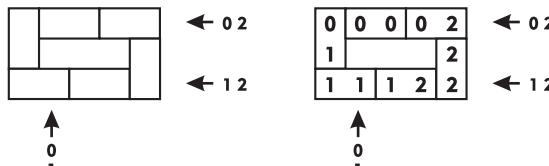


10 POINTS

PUZZLE 8 - DOMINO DISPLAY

Place a double domino 6-set on the display below. The numbers right and below the display indicate which number occur in respective row or column (only these numbers).

Note: The number in grey painted square will be used in puzzle no. 13.



20 POINTS

PUZZLE 9 - ALL THINGS NOT BEING EQUAL

Put the numbers from 1 to 9 in the white squares to make a series of correct mathematical expressions.

Note: The number in grey painted square will be used in puzzle no. 13.



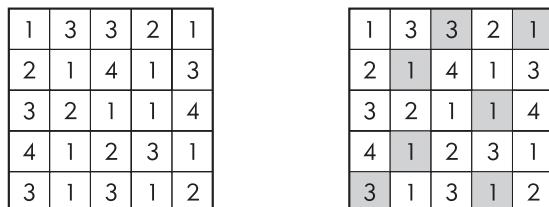
10 POINTS

PUZZLE 10 - BLACK IT!

Paint some squares black, so the following conditions are satisfied:

- No same number can twice in same row or column appear.
- Black squares can't touch each other horizontally or vertically.
- White squares must be connected vertically or horizontally.

Note: Highest painted number in the row marked by arrow will be used in puzzle no. 13.

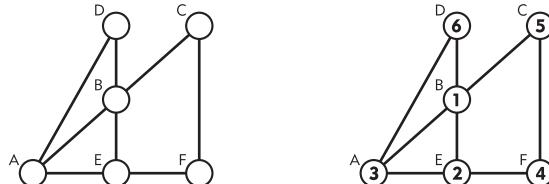


20 POINTS

PUZZLE 11 - ALWAYS THE SAME SUM

Place the number 1-13 into the circles. The sum of the numbers connected with straight lines is always same. The number in circle "K" must be higher than 4.

Note: The number in grey painted square will be used in puzzle no. 13.

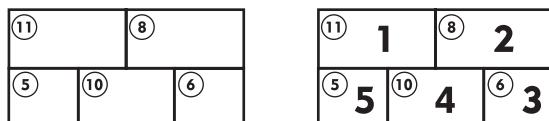


13 POINTS

PUZZLE 12 - NUMBERED BRICKS

Place in the bricks numbers 1-13. The numbers in the circles in each brick indicates the sum of numbers in the bricks connected to that brick.

Note: The number in grey painted square will be used in puzzle no. 13.

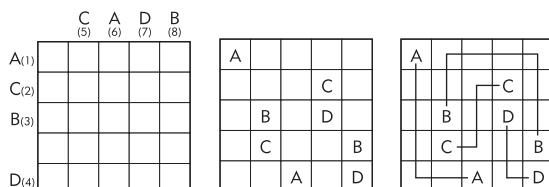


10 POINTS

PUZZLE 13 - ABC-CONNECTION

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

The number in parenthesis indicates the number of puzzle from this group. Specified number from each of 12 previous puzzles indicates how many squares from the edge respective letters has to be shifted in corresponding row or column.



25 POINTS

MAXIMUM
200 POINTS

SPRINT II- individual

PART 10

Friday, October 15th, 14.30. - 15.09.

PUZZLE 1 - MASTERMIND

Try to find out the correct position of the digits or letters. The number of black dots show the number of digits (letters) being at the correct position and the number of white dots show how many other digits (letters) are correct, but in the wrong position. A digit (0~9) and letter can not occur more than once.

13x6
POINTS
+BONUS

9	3	1	○○
2	1	2	○○
3	2	7	●○
<hr/>			●●●

9	3	1	○○
2	1	2	○○
3	2	7	●○
<hr/>			1 2 3 ●●●

INOVATIVE - individual

PART 11

Friday, October 15th, 15.22. - 16.53.

PUZZLE 1 - BACK AND FORTH

Place all groups of letters on the left side, one letter into each square, beginning with the marked square on the top left and ending with the marked square in the middle. Each group of letters begins in the next square after the last letter of the previous group. The groups of letters on the right side can be placed in the same grid, but starting with the marked square in the middle and ending in the square on the top left. All letters "A" and "E" are placed on the right positions.

Note: With exceptions of the first and last groups, beginning of the group of one direction is never the end of the group of the other direction.

PUZZLE 2 - PENTOMINO KAMP

Each pentomino contains two tents, while the trees are not within the pentomino. All trees are already positioned in the grid. None of the pentominoes (tents) do not touch with another pentomino (tent), not even diagonally. Pentominoes can be rotated but not mirrored. Find position of all pentominoes in the grid.

PUZZLE 3 - ATOMIC ALERT

Place **10** symbols of atomic alert in the grid (see drawing!). The symbols do not touch, not even in a single point. The numbers next to the grid indicate how many triangles in each respective row represent a part of the atomic alert symbols. One part of the symbol of atomic alert is already placed in the grid.

PUZZLE 4 - SHOOTING FIELD

The grid represents a shooting field, where the targets are marked by numbers (1-13) and the shooting sites with letters (A-M). The shooting starts on the shooting site A, and ends on the shooting site M. From each site, only one target is shot. Find your way through the shooting field, visiting each shooting site and each target, moving alternately: shooting site - target - shooting site - target and so on (it is allowed to move horizontally, vertically and diagonally under 45 degrees). The lines of moving do not cross.

PUZZLE 5 - BORDERED SEA SNAKE

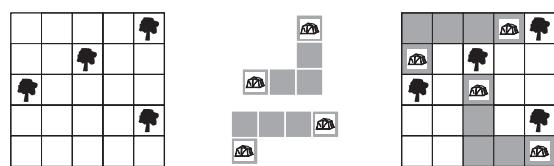
A giant sea snake is hidden under the surface. Positions of snake's head and tail are known. The body of the snake does not touch itself. Black squares in the grid represent the snake, while the white squares represent the sea. The numbers next to the grid indicate total number of the squares of one colour being surrounded by squares of the other colour (black and white squares) in respective row or column. Surrounded squares of one colour by the other do not have to be in an uninterrupted sequence. Find the position of the snake in the grid.

PUZZLE 6 - ADAPTATION

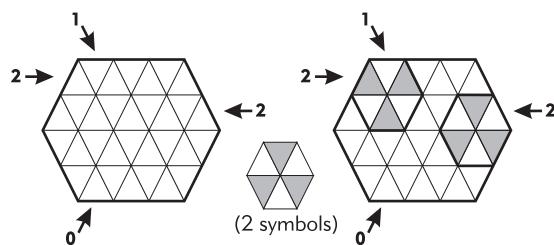
Divide each "house" into 3 equal sized rooms (containing 12 squares each) so that the number in each square indicates how many squares can be seen from that point horizontally or vertically.

ABD ABDC BAC BCA BCDA BDD	ADBA CABD CBA CDB DBA DCB	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>B</td><td>C</td><td>D</td><td>A</td><td>B</td></tr> <tr><td>A</td><td>B</td><td>D</td><td>A</td><td>C</td></tr> <tr><td>C</td><td>C</td><td>D</td><td>B</td><td>A</td></tr> <tr><td>A</td><td>B</td><td>D</td><td>D</td><td>B</td></tr> </table>	B	C	D	A	B	A	B	D	A	C	C	C	D	B	A	A	B	D	D	B
B	C	D	A	B																		
A	B	D	A	C																		
C	C	D	B	A																		
A	B	D	D	B																		

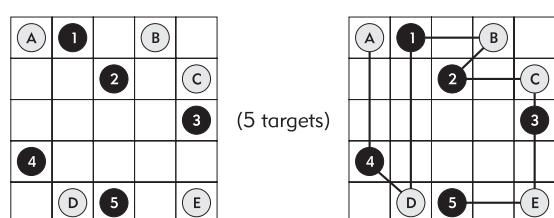
30 POINTS



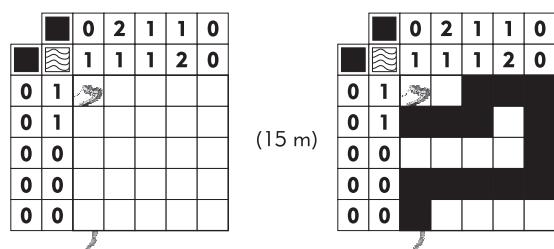
30 POINTS



25 POINTS



15 POINTS



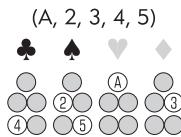
10 POINTS



8+12 POINTS

PUZZLE 7 - LOGICAL SOLITAIRE

Find positions of all cards on the table so that in all rows, columns and diagonals (including short ones by the edge) are cards of different values. Besides, in each row cards must be of different colours.

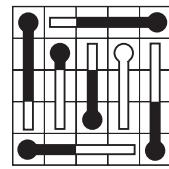
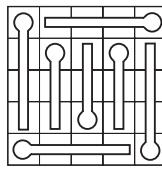


3	4	5	4	A
4	A	2	3	3
2	3	5	4	4
5	4	A	2	2
A	2	3	5	5

30 POINTS

PUZZLE 8 - THERMOMETERS

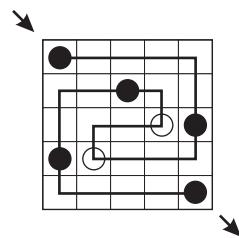
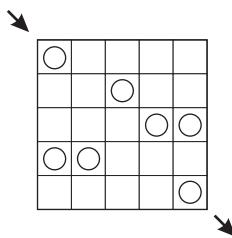
Thermometers are neatly secured in a box, with mercury (if any) located in the thicker parts. The numbers outside the grid indicate number of the thermometers being filled with mercury in respective row or column. Find the levels in thermometers, keeping in mind that mercury can reach only up to the gridlines.



20 POINTS

PUZZLE 9 - TURNING POINTS

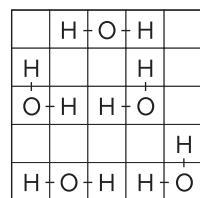
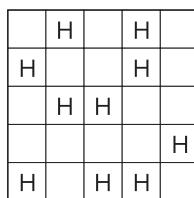
Colour circles in specific columns. There is one coloured circle in each row. After that draw an uninterrupted line from top right to bottom left corner, which passes through all circles and never crosses. The line passes through coloured circles without changing direction, while in the white circle it must change direction. Between two circles (regardless of colour) there is one change of direction.



35 POINTS

PUZZLE 10 - H₂O

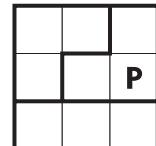
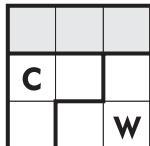
There are 15 molecules of water (H₂O) in the grid, composed of two atoms of hydrogen (H) and one atom of oxygen (O). Locate positions of the atoms of oxygen, provided that no atom of oxygen can touch another atom of oxygen, not even diagonally. Besides, atom of oxygen cannot be positioned diagonally in respect of any respective atom of hydrogen.



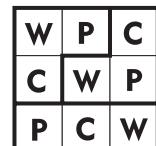
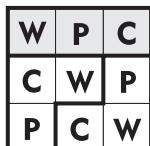
15 POINTS

PUZZLE 11 - CONNECTED MAGIC SQUARES

Fill the squares with letters in such an order that the letters differ in each row, column and marked shapes. Position of the letters in each of the four squares is the same. If everything is done correctly, you will read the name of a Croatian tourist attraction in the shaded fields of the first square (and also in the first row of each square).



30 POINTS

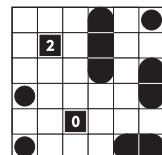
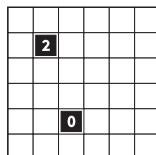


20 POINTS

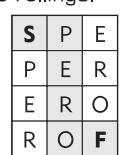
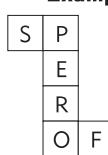
Note: The solution will be considered correct if at least one square is completely filled up.

PUZZLE 12 - LIGHTBOOYS

Ships are located on the sea with lightbuoys (squares with the numbers). The numbers indicate how many parts of the ships are illuminated in respective row, column and diagonal. Find positions of the ships. The ships are not located near the lightbuoys, and they do not touch each other, not even diagonally.

**PUZZLE 13 - LOOKING FOR FENIKS**

Find the way from start (S) to finish (F) of the cube of a given cover rolling over 13 times. The letter in the field through which the cube has rolled must correspond with the letter on top side of the cube. The correct way of the rolling cube should give twice the name of Croatian puzzle magazine "Feniks".



20 POINTS

Example: Once name PERO in five rollings.

MAXIMUM
300 POINTS

JIGSAW PUZZLE

PART 12

Friday, October 15th, 17.06. - 17.58.

PUZZLE 1 - WHAT'S ON THE PICTURE?

Each team will receive eight puzzles. Each puzzle consists of 9 pieces which, when placed correctly, form a picture. Try to form as many pictures as possible.

8x20
POINTS
+BONUS

Bonus: 40, 30, 20, 10, 5.

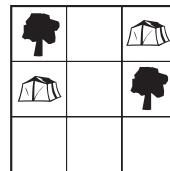
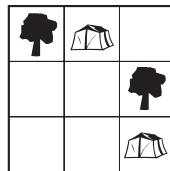
FINALS

1/4 FINAL

Saturday, October 16th, 10.00. - 11.30.

PUZZLE 1 - MESS IN THE KAMP

In the grid there is a tent placed next to a tree, but on the wrong position. Locate true positions of the tents. In each row and column must be exactly two tents. Tents don't touch each other, not even diagonally.

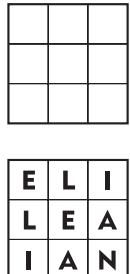
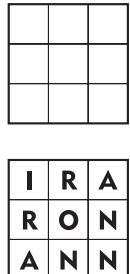
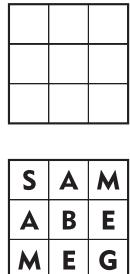
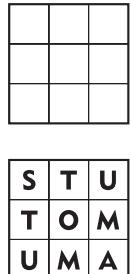
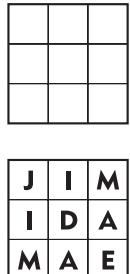


PUZZLE 2 - ACTORS IN MAGIC SQUARES

Place surnames of listed actors/actresses in five magic squares (same surname goes horizontally and vertically).

ABE
ANN
ELI
IAN
IDA
IRA
JIM
LEA

MAE
MEG
RON
SAM
STU
TOM
UMA



J I M
I D A
M A E

S T U
T O M
U M A

S A M
A B E
M E G

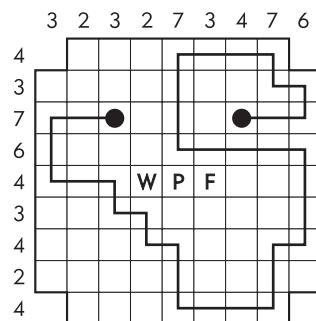
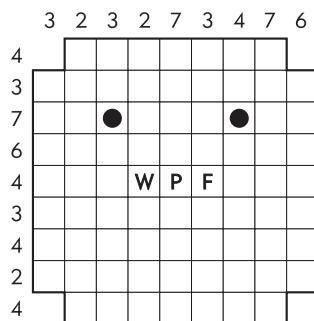
I R A
R O N
A N N

E L I
L E A
I A N

PUZZLE 3 - JOIN THE CIRCLES

Join both circles by a single continuous line while observing these conditions:

- The line must be only drawn through the centres of the squares horizontally and vertically.
- The line can make a 90° turn within a square.
- No square can be re-entered (the line can neither cross nor touch anywhere).
- The line must not cross squares with letters.
- The peripheral numbers mark how many squares in the particular column or row the line occupies, including two squares with circles.



FINALS

1/2 FINAL

Saturday, October 16th, 11.30. - 12.15.

PUZZLE 1 - MULTIPLICATION TABLE

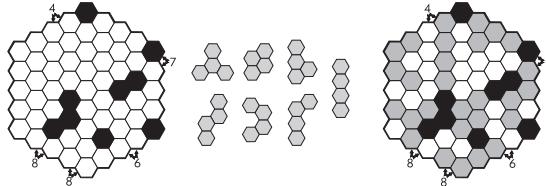
Locate digits into the cells so that each digit from 1 to 5 appears exactly once in each row and each column. Numbers on the circles tell the product of the four digits around them.

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

(1-4)

PUZZLE 2 - TETRAMINO IN HONEY-COMB

Place all seven tetraminoes in the honeycomb. They don't touch each other. Black hexagons do not contain any parts of tetraminoes. The numbers indicate how many hexagons, as parts of tetraminoes, are to be found in respective directions.



PUZZLE 3 - NOT FOUR IN A ROW

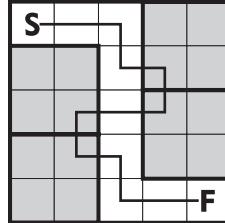
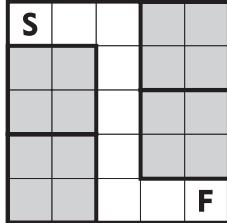
A game of four in row is played between two players. Four in a row means four connected X's or O's horizontally, vertically or diagonally. Normally, when a player has "four in a row", the game ends. Not this time: the players continue playing until the grid is full. That means that there must be one X more than O or vice versa. In this game none of the players has scored "four in a row", so there is no winner. Locate positions of all X's and O's in the grid.

O	X		X
		X	
	X		X
		O	O

O	X	O	X
X	O	X	O
O	X	X	X
O	X	O	O

PUZZLE 4 - PASS SQUARES

Connect the "start" (S) and the "finish" (F) with a line that passes through exactly one cell of each gray 2x2 square. You may move only horizontally or vertically. The path may not touch or cross itself.



FINALS

FINAL

Saturday, October 16th, 12.15. - 13.00.

PUZZLE 1 - CROSS SUMS INCLUDING "0"

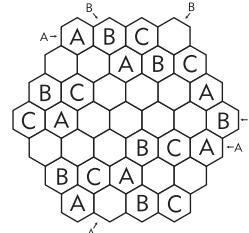
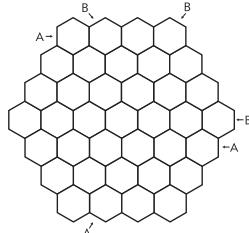
The sum of the digits for each number to be filled in is equal to the number in the corresponding grey cell. The "0" is used and same digit can never appear more than once in the same group.

6	5	10	12	8
29				

6	5	10	12	8
29	0	2	3	1
	5	8	9	7

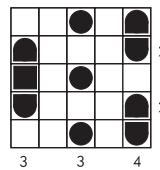
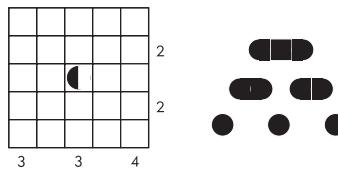
PUZZLE 2 - EASY AS ABC

There is an A, a B and a C in each directions of the honey-comb while the rest of the hexagons are empty. The letters outside the honey-comb indicate which letter is first in the respective direction.



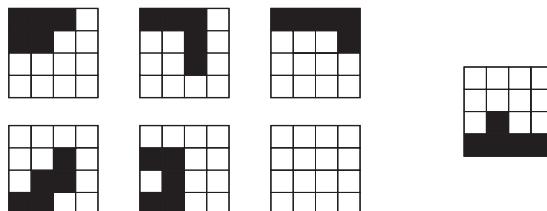
PUZZLE 3 - SHIPS HEADS AND STERNS

Place the entire fleet in the diagram. Ships can be lying horizontally or vertically, and must not touch, not even diagonally. The numbers at the side and along the bottom of the diagram tell you how many squares are filled in that row or column.



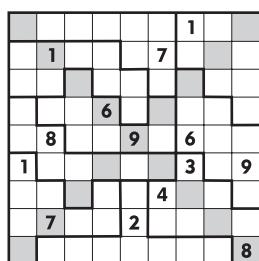
PUZZLE 4 - MISSING PENTOMINO

Find the shape and position of pentomino, that according to same rule, should fit into the empty square.



PUZZLE 5 - NUMBER PLACE

Fill in the square with the figures from 1 to 9 in such a way that the figures in all rows and all columns, diagonals and all black-edged shapes are different from each other.



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

PUZZLE 6 - STAR BATTLE

Place two stars, the size of one square, in each column, each row and each black-edged part of the grid. The stars do not touch each other, not even diagonally.

