



16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

INSTRUCTION BOOKLET

Presented by



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Schedule

October 6th, Saturday		
All day		Arrivals
October 7th, Sunday		
7:00	8:30	Breakfast
9:00	12:00	City tour 1 Secrets of Old Rio walking tour
12:30	13:50	Lunch
14:00	18:00	City tour 2 Corcovado Christ The Redeemer
19:00	21:00	Dinner and Opening Ceremony
21:00	-	Q&A about the puzzles
October 8th, Monday First day of competition		
7:00	8:30	Breakfast
9:00	9:40	Championship official opening and Part 1
10:00	11:30	Part 2
12:00	12:20	Part 3 in group
12:30	13:50	Lunch
14:00	15:00	Part 4
15:30	16:10	Part 5
16:30	17:30	Part 6 in group
19:00	20:30	Dinner

October 9th, Tuesday Second day of competition		
7:00	8:30	Breakfast
9:00	9:40	Part 7
10:00	11:30	Part 8
12:00	12:20	Part 9
12:30	13:50	Lunch
14:00	14:30	Part 10
15:00	15:40	Part 11
16:00	17:30	Part 12 in group
19:00	20:30	Dinner
October 10th, Wednesday Semifinal, final tests and awarding party (farewell party)		
7:00	8:30	Breakfast
9:00	9:40	Semifinal (ten best competitors)
10:00	10:40	Semifinal Results
11:00	11:30	Final (five best competitors)
12:30	13:50	Lunch
14:00	19:00	Free time
19:00	23:00	Awarding and farewell party
October 11th, Thursday		
7:00	8:30	Breakfast
All day		Departure



Bonus for saved time

- In the rounds 1,2,3,4,5,6,7,8,10 and 11, the competitor or team that solves all of the puzzles correctly before the end of the round time will score points for this.
 - In the individual rounds, the competitor will score 5 points for each saved minute.
 - In the group rounds, the group will score 20 points for each saved minute.
 - To receive the bonus, as soon as you solve all of the puzzles, tell an organizer about it. He'll come to you and write down the result time on your test, then he will take it. You will only score bonus points if all of the puzzles have been solved correctly.
-

Bonus for position

In the rounds 1,2,3,4,5,6,7,8,10 and 11, the first 5 competitors or teams that solve all of the puzzles correctly will score bonus for position, besides bonus for time, according to the schedules which are in each description of the round, in the booklet.

In the 12th round, each team that completes the competition will score a 2-point bonus for each second the circuit takes from sphere of the point A to the point B. In this round there's no bonus for saved time.

Penalties

- In the 6th round, if the number of the individual puzzles not solved by the team is:
 - More than 1: the team won't score any bonus point (for time or position) in this round.
 - More than 3: the team won't score the last puzzle points (The Big One Twins) of this round.
- In the 10th round, each time the competitor asks for help he loses 50 points, even if he solves the puzzle correctly.
- In the 12th round, if the circuit time is more than 3 minutes, or the sphere doesn't stop on point B, the team won't score.

Finals

- First 10 puzzlers after round 12 will take part in semifinals.
- Each finalist will start the semifinal at a different time according to the points he or she scored during rounds 1, 2, 4, 5, 7, 8, 9, and 11. The actual quotient will be decided before the semifinals such that the best finalist will have 40 minutes.
- Next to each finalist there will be a supervisor. When a finalist finishes a puzzle, he or she may give it to the supervisor for checking and goes on with another puzzle. If the supervisor finds an error, he or she will show the instruction that was not obeyed and penalty puzzler with 90 seconds. During penalty time the puzzler may not solve or check any puzzle.
- First five puzzlers who solve semifinal puzzles go to the finals. If there are no five puzzlers ready during the time, then time is extended unlimited until five puzzlers are ready.
- The finals will follow the same rules as semifinals. However, this time, puzzles will be printed on large sheets and the audience will be able to see the solution process.



16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 1
individual

WELCOME

8th October 2007

09:00 - 09:40 (40 minutes)

Maximum score: 200 points + bonus

POINTS

Group	Right Answers	Points
1	1	32
	2	48
	3	56
	4	60
2	1	40
	2	60
	3	70
	4	75
3	1	35
	2	52
	3	61
	4	65
Total		200

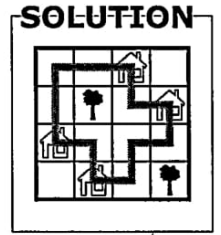
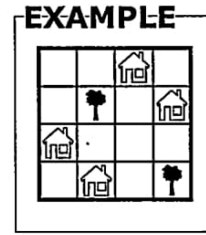
BONUS

		# First-Puzzlers				
		1	2	3	4	5...
Position	1 st	30	23	19	17	17
	2 nd		17	14	13	13
	3 rd			11	11	10
	4 th				9	8
	5 th					7

Group 1

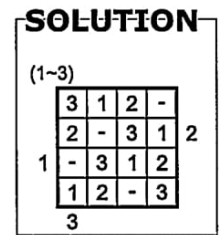
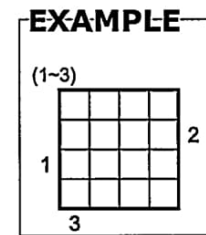
City Maze

When you travel to these cities, you have to visit every house. Every time you arrive at a house, you must turn 90° and you cannot pass through a tree. Draw a continuous loop (its sections connect the centres of the neighbouring squares by a straight line) showing the path you made. The loop must not touch or cross itself.



São Paulo Skyscrapers

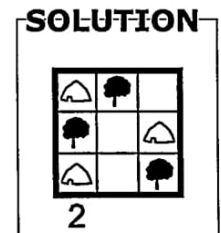
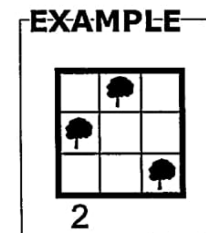
In this Skyscraper variation you have to fill the grid with numbers representing skyscraper heights. Numbers outside the grid show how many skyscrapers are visible from that direction. You have to put skyscrapers of different heights (1 to 4 in the first and 1 to 5 in the second), without repetition in each row and column.



Group 2

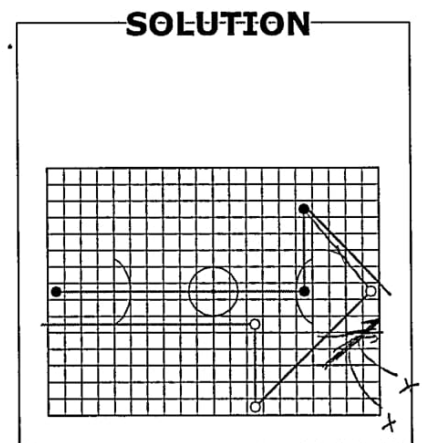
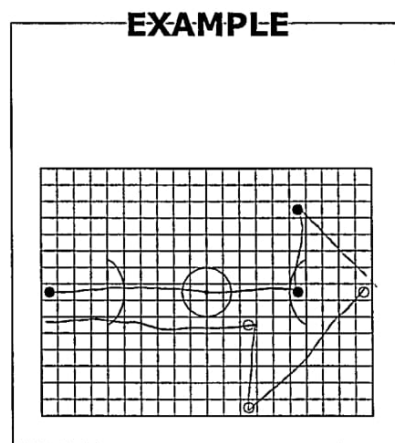
Amazon Tree-oca

The Rain Forest (also known as Amazon Forest) has many trees and rivers. Its native inhabitants, the Indians, like to build their ocas near a tree. So, in this part of the forest, you have to draw an oca in an empty square adjacent to a tree square. Ocas cannot touch each other even diagonally. Numbers outside the grid indicate how many ocas are in that direction.



Five Times Champion

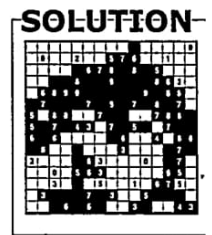
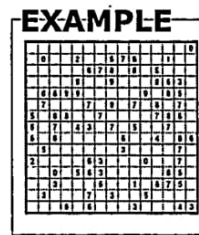
Find out how each of the soccer teams scored a goal. For both teams, their attack ending in a goal started from their goalkeeper, and after all the players of that team touched the ball, the last player kicked the ball to the opponent goal. The ball always moves either horizontally, vertically or diagonally,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



Conceptis Fill-A-Pix

Fill-a-Pix consists of a grid with number clues scattered in various places. Each number shows how many of the nine squares - the one with the number plus the eight around it - should be filled in.

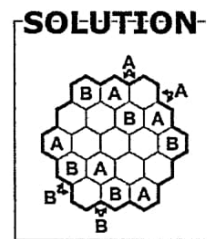
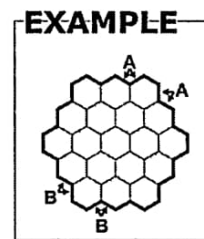
Filled squares are shaded with a pencil. In the end you should be able to see a beautiful Brazilian landscape.



Group 3

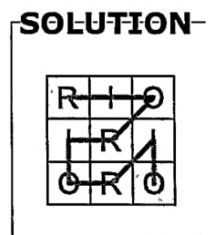
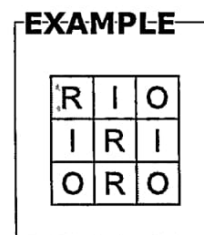
Easy as RIO

Every row and diagonal in this grid contained R,I or O (F, U, N and K in the second puzzle), although not necessarily in that order. Every letter outside the grid refers to the first of the four shapes encountered when travelling in the direction of the arrow.



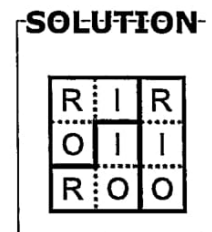
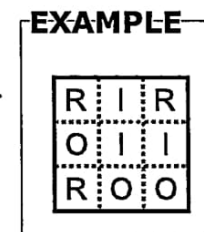
Password: BRASIL

Starting in the gray "B" and finishing in the gray "L" (in the center of the grid), draw a path connecting the letters of the word BRASIL (yes, it's written in Portuguese!), in the sequence of reading. When you finish the first word, start again, in the next "B" and so on. The path can travel horizontally, vertically or diagonally and it passes through all squares, without crossing or overlapping itself.



Brasil Partitioner

Divide the grid into separate pieces so that each section contains exactly one of each letter of the word BRASIL.





16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 2
individual

CLASSICS

8th October 2007

10:00 - 11:30 (90 minutes)

Maximum score: 450 points + bonus

POINTS

Group	Right Answers	Points
1	1	39
	2	68
	3	88
	4	98
	5	103
	6	105
2	1	35
	2	62
	3	80
	4	89
	5	93
	6	95
3	1	37
	2	65
	3	84
	4	93
	5	98
	6	100
4	1	33
	2	58
	3	75
	4	83
	5	87
	6	90
5	1	34
	2	51
	3	60
Total		450

BONUS

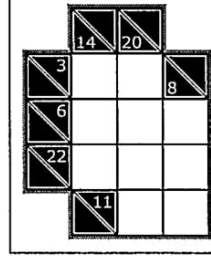
		# First Puzzlers				
		1	2	3	4	5...
Position	1 st	80	53	43	38	36
	2 nd		37	30	27	25
	3 rd			22	20	19
	4 th				15	14
	5 th					11

Group 1

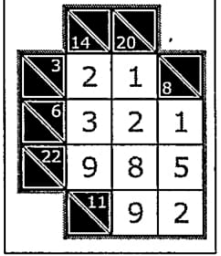
Kakuro

Fill all empty squares using numbers from 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, no number may be used in the same block more than once.

EXAMPLE



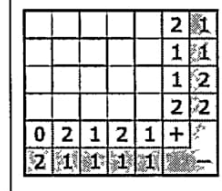
SOLUTION



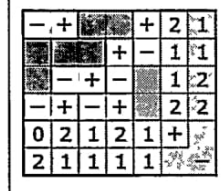
Magnets

The square is made up of magnetic and non-magnetic plates. Each magnetic plate has two halves: positive (+) and negative (-). The halves of magnetic plates with the same charge cannot border on any side as they repel each other, however their corners can touch. The numbers of positive and negative charges in each line and column are marked. Non-magnetic insulation plates are as big as the magnetic ones and are to be marked in black. What is the position of all the magnetic plates in the diagram?

EXAMPLE



SOLUTION

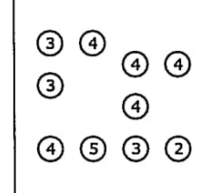


Group 2

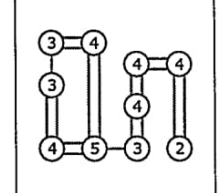
Hashiwokakero

Connect islands (the dots with numbers) with as many bridges as the number in the island. There can be no more than two bridges between two islands. Bridges cannot go across islands or other bridges. The bridges will form a continuous link between all the islands.

EXAMPLE



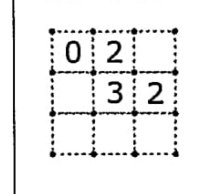
SOLUTION



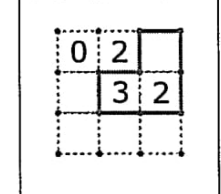
Fences

Connect dots in the diagram to form a single unbroken loop. Each number indicates how many segments of this loop it is adjacent to. The loop only contains 90-degree turns, and it does not overlap or intersect itself.

EXAMPLE



SOLUTION

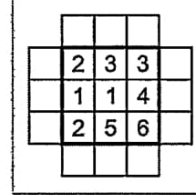


Group 3

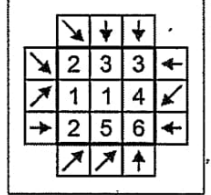
Arrows

Draw an arrow in each square of the diagram border so that every number in the grid indicates how many arrows are pointing to it. Arrows may point right, left, up, down or at a diagonal, but each one must point to at least one number.

EXAMPLE



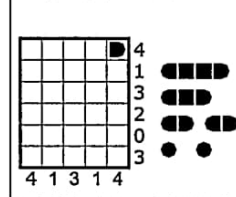
SOLUTION



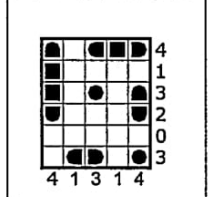
Battleships

Locate the position of the 10-ship fleet in the grid. The fleet is shown to the right of the grid: one 4-unit battleship, two 3-unit cruisers, three 2-unit destroyers and four 1-unit submarines. Each segment of a ship occupies a single cell. Ships are oriented either horizontally or vertically, and they do not touch each other, not even diagonally. The numbers on the right and bottom edges of the grid reveal the total number of ship segments that appear in each respective row or column.

EXAMPLE



SOLUTION

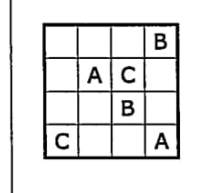


Group 4

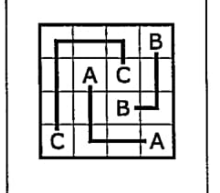
ABC Connections

Connect each pair of identical letters with an unbroken line, using all squares. Lines do not overlap or cross each other, and no two lines may share an intersection.

EXAMPLE



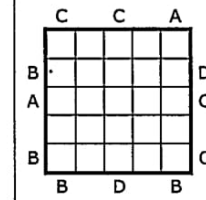
SOLUTION



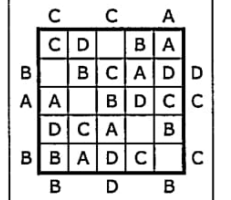
Easy as ABC(D)

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

EXAMPLE



SOLUTION

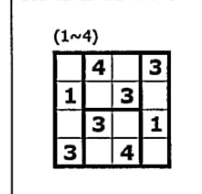


Group 5

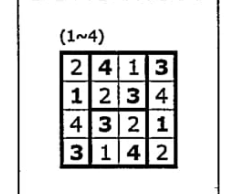
Irregular Sudoku

The objective is to fill a grid so that each column, each row, and each region contains the digits.

EXAMPLE



SOLUTION





16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 3
 team

MULTI-SUDOKU

8th October 2007

12:00 - 12:20 (20 minutes)

Maximum score: 300 points + bonus

POINTS

Group	Right Answers	Points
1	1	160
	2	240
	3	280
	4	300
Total		300

BONUS

		# First Teams				
		1	2	3	4	5...
Position	1 st	90	59	48	42	40
	2 nd		41	33	30	28
	3 rd			24	22	20
	4 th				16	15
	5 th					12

Multi-sudoku

Place the pieces in the diagram so that the numbers, colors, letters and symbols appear once in each row, column and group.



16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 4
individual

INNOVATIVES

8th October 2007

14:00 - 15:00 (60 minutes)

Maximum score: 300 points + bonus

POINTS

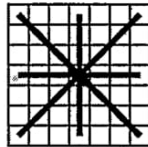
Group	Right Answers	Points
1	1	32
	2	48
	3	56
	4	60
2	1	35
	2	52
	3	61
	4	65
3	1	27
	2	40
	3	47
	4	50
4	1	29
	2	44
	3	51
	4	55
5	1	37
	2	56
	3	65
	4	70
Total		300

BONUS

		# First Puzzlers				
		1	2	3	4	5..
Position	1 st	50	35	29	26	24
	2 nd		25	21	19	18
	3 rd			16	14	14
	4 th				11	11
	5 th					9

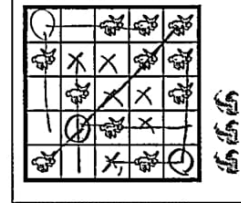
Hunted

The goal is to distribute the Indians on the grid (in the empty squares) so that they can hunt all the animals. Each Indian can capture, with his bow and arrows, all animals within 3 squares away from him, in any direction (line, column and diagonals).

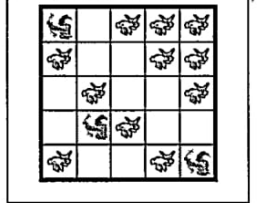


Each animal can only be captured by one Indian, and no Indian can be within the reach of another Indian's arrow. The number of Indians appears to the side of the diagram.

EXAMPLE



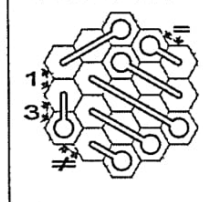
SOLUTION



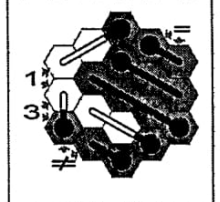
Matches

The goal is to find out which segments of matches placed on the tablecloth (grid made of hexagons) are burnt (painted) and which aren't (white). The flame always burns the match from the head (round side) to the base (square side) – the flame never skips a segment. The flame from the segment of match burns the part of the tablecloth (hexagon) where it is. The matches have different sizes and may be completely burnt, partially burnt or completely new. The numbers around the tablecloth indicate the quantity of burnt segments in each column or diagonals. The tablecloth will always have only one burnt piece and one unburnt piece (the burnt or unburnt areas have to be full pieces). The numbers around the tablecloth indicate how many match segments are burnt in each line pointed out by the arrows. A [=] sign indicates that the pointed lines have the same number of burnt segments, and a [≠] sign indicates that the lines have a different amount of burnt segments.

EXAMPLE



SOLUTION





16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 5
 individual

WORDS, WORDS

8th October 2007

15:30 - 16:10 (40 minutes)

Maximum score: 150 points + bonus

POINTS

Group	Right Answers	Points
1	1	67
	2	111
	3	133
	4	144
	5	150
Total		150

BONUS

		# First Puzzlers				
		1	2	3	4	5...
Position	1 st	30	23	19	17	17
	2 nd		17	14	13	13
	3 rd			11	11	10
	4 th				9	8
	5 th					7

Letter Sudoku

This is a Sudoku with the same rules as the traditional one, but letters in the numbers places. All latin words shown at diagram side should appear at least once, and can be read vertically, horizontally or diagonally. You don't need to point out the words, only complete the Sudoku.

Missing Tupi

うめ子たてておく

Fifteen words written in Tupi (ancient language spoken in Brazil) are listed below and can be found in the word search grid. Each word reads in a straight line horizontally, vertically or diagonally. The 16 central letters in the grid must be filled in before the puzzle can be completed. Complete the central cells and find the 15 words.

EXAMPLE

O	X	E	A
U			K
T			N
B	P	W	Q

ORA
BOLA

SOLUTION

O	X	E	A
U	R	L	K
T	O	A	N
B	P	W	Q

ORA
BOLA

Torto Backwards

Torto is a very popular cultural puzzle in Brazilian magazines. This version, unfortunately, is not cultural: you must connect characters to form a word in Tupi, language used by ancient Brazilian Indians. The rules are as follows: connect vertical, horizontal and diagonal adjacent characters. You cannot jump a character, or cross a path already made, and you cannot use the same character twice. To make it easier, a lot of words in Tupi are already found, but some of them cannot be found in the diagram. Tell us which words cannot be found in the diagram, according to the rules.

EXAMPLE

G	O
O	R

GROO
GOO

SOLUTION

G	O
O	R

GROO
GOO

Find-A-Beach

Find the following list of beaches in the diagram. One beach is not in the diagram. Find out which one it is.

EXAMPLE

B	O	N	S	M
Q	D	A	A	A
P	Z	C	E	R
U	A	D	F	L
E	M	E	L	A

LEME
MACAE
PONTA

SOLUTION

B	O	N	S	M
Q	D	A	A	A
P	Z	C	E	R
U	A	D	F	L
E	M	E	L	A

LEME
MACAE
PONTA

Place a word

Place all the listed international words in the grid so that each word has at least two letters in common with at least two other words. The letters in the grid (already given) should be used in at least one word. Any word which is not on the list must not be in the grid.

H			
	T		
		L	

HARRY TOTAL
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Y	L			

HARRY TOTAL
HOTEL REAL



16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 6
 team

THE WEAKEST LINK
 8th October 2007

16:30 - 17:30 (60 minutes)

Maximum score: 4 x 150 + 300 points + bonus

POINTS

Group	Right Answers	Points
1*	1	56
	2	98
	3	126
	4	140
	5	147
	6	150
2	1	300
Total		900

* Individual

BONUS

		# First Teams				
		1	2	3	4	5...
Position	1 st	300	185	147	130	120
	2 nd		125	100	88	82
	3 rd			68	60	56
	4 th				42	39
	5 th					28

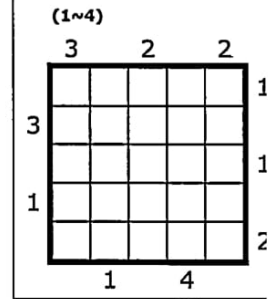
Twins

Skyscrapers:

The grid symbolizes a neighborhood. Each row and column contains buildings of different heights. The numbers outside the grid indicate how many buildings are visible from that direction (the higher buildings hide the lower ones behind them).

The numbers in brackets indicate the minimum and maximum building height for that grid.

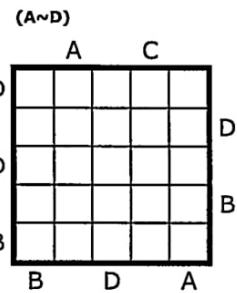
EXAMPLE



Simple as ABC:

Fill in the letters in the diagram. Each letter occurs once in each of the rows and columns. The letters outside the diagram indicate the letters you come across first from that direction.

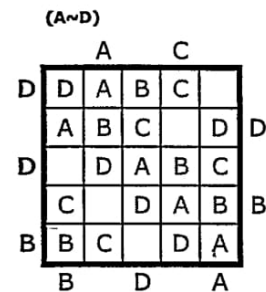
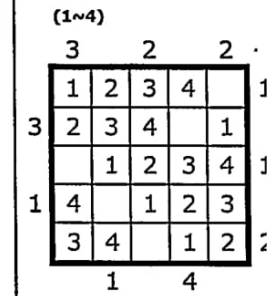
The letters in brackets indicate the minor and greater letters for that grid (in alphabetical order).



Twins:

In each pair (Skyscrapers and Simple as ABC) each letter corresponds to a number. The letters occupy the same position, in the grid, as their corresponding numbers.

SOLUTION





16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 7
individual

VARIA

9th October 2007

09:00 - 09:40 (40 minutes)

Maximum score: 205 points + bonus

POINTS

Group	Right Answers	Points
1	1	31
	2	52
	3	62
	4	67
	5	70
2	1	33
	2	55
	3	66
	4	72
	5	75
3	1	32
	2	48
	3	56
	4	60
Total		205

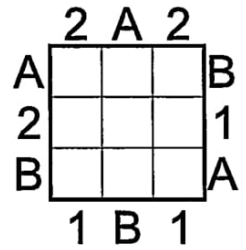
BONUS

		# First Puzzlers				
		1	2	3	4	5...
Position	1 st	35	26	22	20	18
	2 nd		19	16	15	14
	3 rd			12	11	11
	4 th				9	9
	5 th					8

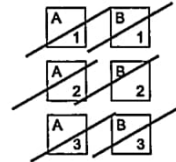
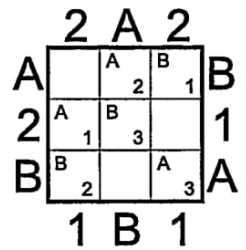
Easy as Skyscrapers

Locate all letter-number pairs into the grid so that no letter or digit is repeated in a row or a column. Numbers represent the height of the building there. Letters around the grid show the first letter seen in that direction. Numbers around the grid show the number of buildings seen from that direction.

EXAMPLE



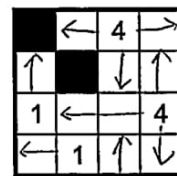
SOLUTION



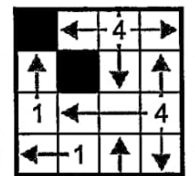
Torus Four Winds

Draw one more horizontal or vertical line from each numbered square on the grid below, which is an open configuration of a torus. Lines cannot cross other numbered squares. Each number indicates how many squares are connected by its lines. No line overlaps or intersects another.

EXAMPLE



SOLUTION





16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 8
individual

CIRCULAR

9th October 2007

10:00 - 11:30 (90 minutes)

Maximum score: 455 points + bonus

POINTS

Group	Right Answers	Points
1	1	53
	2	89
	3	107
	4	116
	5	120
2	1	37
	2	65
	3	84
	4	93
	5	98
	6	100
3	1	49
	2	82
	3	98
	4	106
	5	110
4	1	61
	2	92
	3	107
	4	115
Total		445

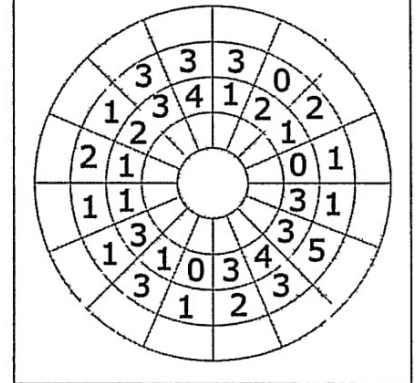
BONUS

		# First Puzzlers				
		1	2	3	4	5...
Position	1 st	80	53	43	38	36
	2 nd		37	30	27	25
	3 rd			22	20	19
	4 th				15	14
	5 th					11

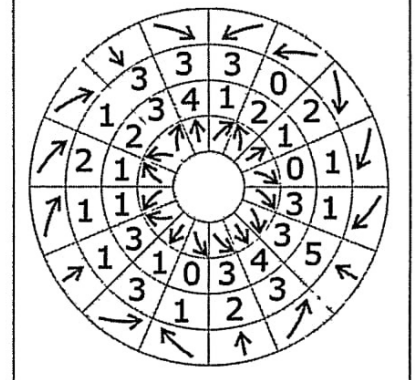
Circular Arrows

In each empty cell on the inner border and on the outer border, insert an arrow pointing at one of the three possible neighbor cells that contain numbers. Each number in the grid indicates the number of arrows pointing at it.

EXAMPLE



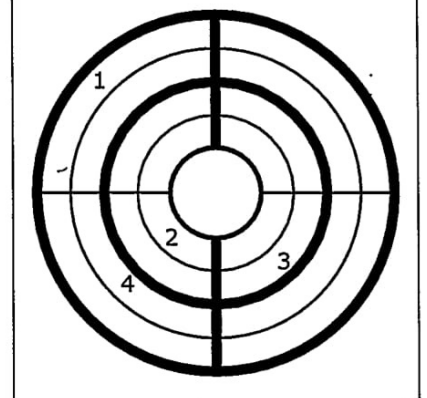
SOLUTION



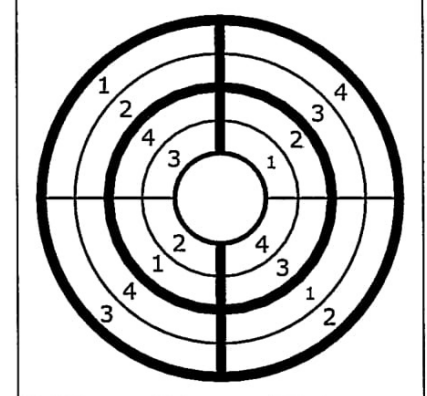
Circular Sudoku

Fill the grid with numbers 1 to 9 (1 to 4 in the example) so that every number appears in each annulus, sector and outlined region.

EXAMPLE



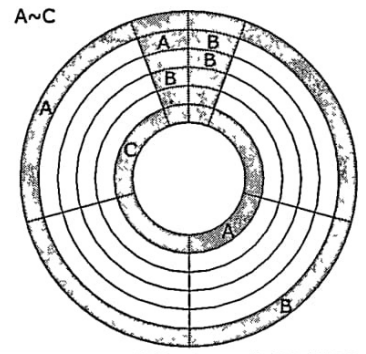
SOLUTION



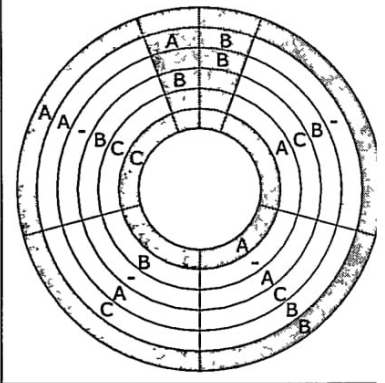
Circular Easy as ABC

Fill the grid with letters A, B, C (or A, B, C, D), so that each circular sector and annulus contain exactly one instance of all these symbols. Letters outside the grid and at the top circular sector appear first in corresponding directions.

EXAMPLE



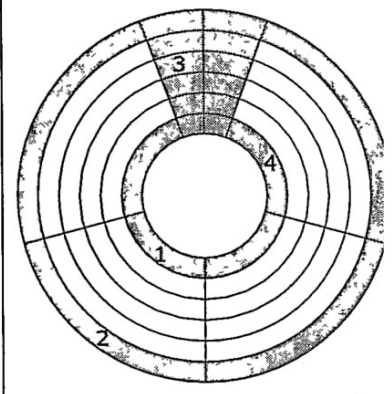
SOLUTION



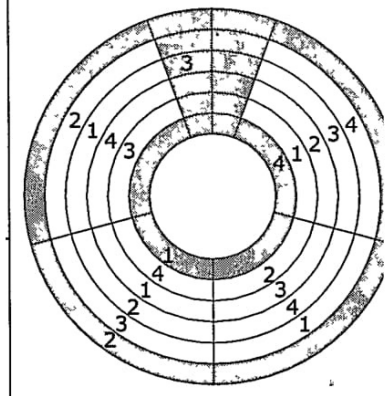
Circular Skyscrapers

Fill the grid with numbers 1, 2, 3, 4 (or 1, 2, 3, 4, 5), so that each circular sector and annulus contain exactly one instance of all these numbers, representing the height of buildings in a neighborhood. Numbers at the inner and outer annulus and at the top circular sector show the number of visible skyscrapers from that direction (the higher buildings hide the lower ones behind them). At the annulus, use the same logic, considering a curved view along the annulus.

EXAMPLE



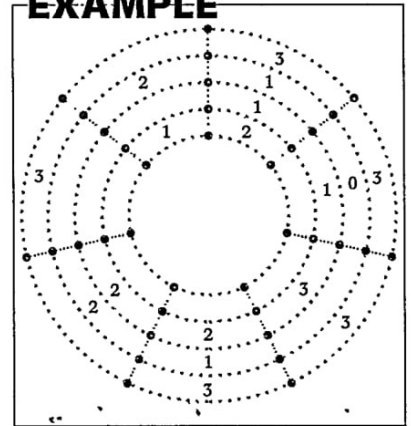
SOLUTION



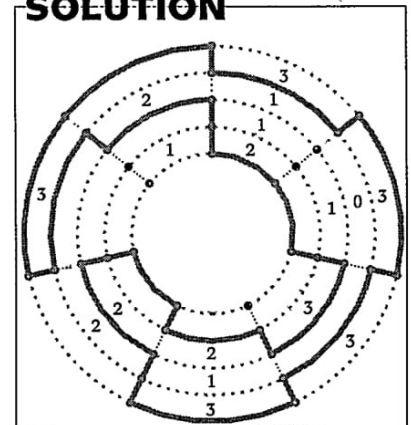
Circular Fences

Draw a single continuous loop along the lines of the grid. The loop may not touch or cross itself. Each number shows the number of sides of the cell used by the loop.

EXAMPLE



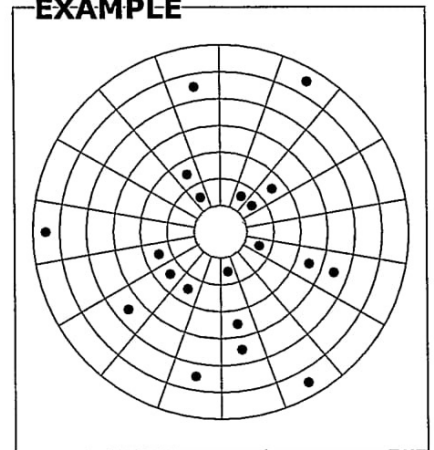
SOLUTION



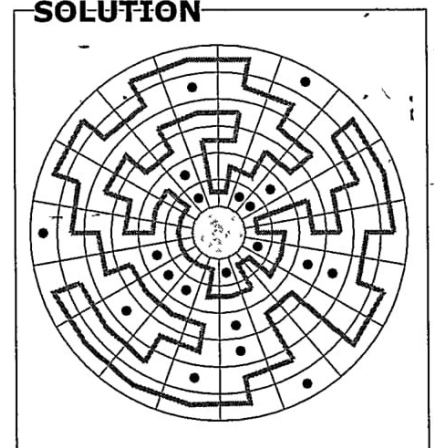
Circular Maze

Draw a single continuous loop that passes through every cell of the grid that doesn't contain a black circle. The loop may not touch or cross itself.

EXAMPLE



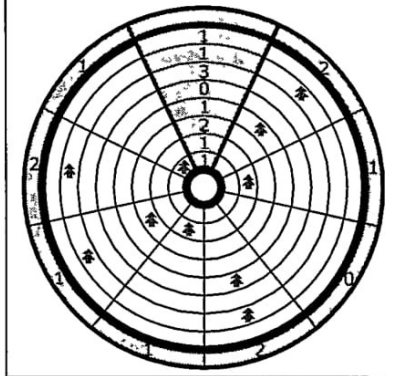
SOLUTION



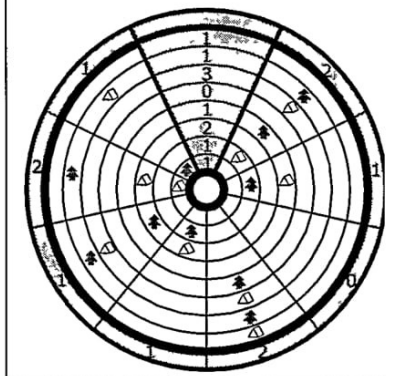
Circular Tree-Tents

Locate all the tents in the grid. Each tree is exactly connected to only one tent. A tent can be found in the same annulus or sector, adjacent to the tree. Tents are never placed adjacent to each other vertically, horizontally, or even diagonally. The numbers outside the grid and at the top sector give the total number of tents in the corresponding annulus or sector.

EXAMPLE



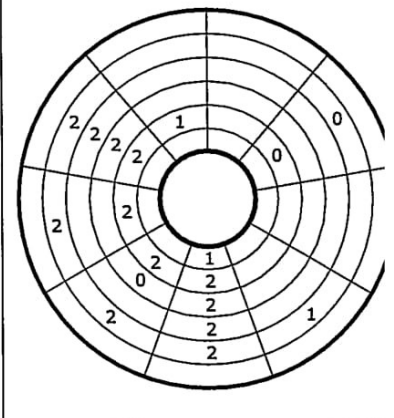
SOLUTION



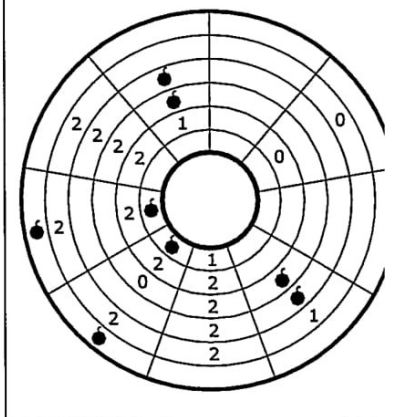
Circular Minefield

Place bombs in the grid. The numbers in each cell indicate the number of mines around that particular number. No bomb can be placed in the cells that contain numbers.

EXAMPLE



SOLUTION





16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 9
individual

SCREEN TEST

9th October 2007

12:00 - 12:20 (20 minutes)

Maximum score: 100 points

POINTS

Group	Right Answers	Points
1	1	10
	2	20
	3	30
	4	40
	5	50
	6	60
	7	70
	8	78
	9	86
	10	90
	11	94
	12	96
	13	98
	14	99
	15	100
Total		100

Group 1

Twins

Find the twins. Please ignore the colors.

Sequence

Which is the next number, following the logical sequence?

Cube count

Using only parts of the structure, how many cubes can you count? Obs. there are no hidden cubes or spaces.

Unfolded

Choose the shape that, when folded, results in the solid above.

Gears

In which direction is the red gear rotating?

不靠轴

blue

is the star

Logical thinking

Which image follows logically?

Missing

We're going to show you some objects. Then, we're going to add one. Which one was added?

Pairs

Arrange the following things into logical pairs.

Projection

Which of these projections can be made with the following piece?

Shadow

Find which of the figures is casting a correct shadow.

Translate it

Use the code and translate the follow sequence of symbols into a name.

Labyrinth

Please write the coordinates of the spot from where the picture was taken in the labyrinth.

Blocks

How many blocks were used to make the following set?

Lines

Which of the mice will be the happy owner of the piece of cheese?

Laser Beam

Yes, we froze a laser beam! But, in Rio temperature is rising, and we are expecting it to unfreeze in a few hours. If it happens, how many times will it "hit" a mirror and reflect, until it leaves the board?

11
↑
15



16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 10
individual

FOUR WIND IN FACES

9th October 2007

14:00 - 14:30 (30 minutes)

Maximum score: 150 points + bonus

POINTS

Group	Right Answers	Points
1	1	150
Total		150

BONUS

		# First Puzzlers				
		1	2	3	4	5...
Position	1 st	30	23	19	17	17
	2 nd		17	14	13	13
	3 rd			11	11	10
	4 th				9	8
	5 th					7

Four Winds in Faces

A Four Winds diagram was divided and glued to the faces of different pieces, being possible that the pieces also received false parts. The aim is to correctly solve the Four Winds, but, in order to do that, it's necessary to find the correct position for each piece. All faces of all pieces contain one letter that identifies them. Ignore those letters to solve the Four Winds. The rules to Four Winds are the traditional ones:

- Draw horizontal or vertical lines, starting from squares that contain numbers;
- The numbers always represent the addition of the length of the lines that start in that square;
- Lines can't overlap, and always pass through the center of the empty square;
- All squares have to be used.

To find out the correct assembling of the pieces, the following rules should be observed:

- All pieces must be used;
- Pieces must be positioned orthogonally in relation to the others;
- All visible faces should be used.

The competitors can ask for a maximum of two hints to solve the puzzle. The first hint is a drawing of the correct assemblage (no identified faces), and the second one indicates which faces should be hidden. Each hint will lead to the subtraction of 50 points for that competitor.

The first five competitors who are able to solve the puzzle correctly without hints will share a bonus . In case no one solves the puzzle without a hint, the first five competitors who are able to solve the puzzle correctly with one single hint will share a bonus. If no one solves the puzzle with one single hint, no one gets the bonus points.



16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 11
individual

IMAGES

9th October 2007

15:00 - 15:40 (40 minutes)

Maximum score: 200 points + bonus

POINTS

Group	Right Answers	Points
1	1	26
	2	39
	3	45
2	1	29
	2	43
	3	50
3	1	31
	2	47
	3	55
4	1	27
	2	40
	3	47
	4	50
Total		200

BONUS

		# First Puzzlers				
		1	2	3	4	5...
Position	1 st	35	26	22	20	18
	2 nd		19	16	15	14
	3 rd			12	11	11
	4 th				9	9
	5 th					8

Group 1

Jigsaw

Which parts complete the jigsaw correctly?

Photographer

Which one is the accurate negative of the photograph?

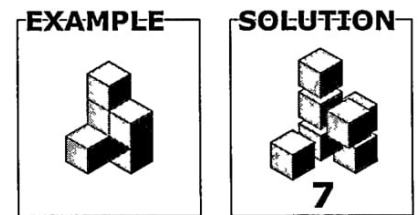
Group 2

Just Faking

Three of the 15 pieces do not actually appear in the picture below. Which ones are they?

Little Blocks

What's the smallest number of blocks (cubes) needed to create the solid? The solid is a single piece, and each block matches the others by its face, exclusively.



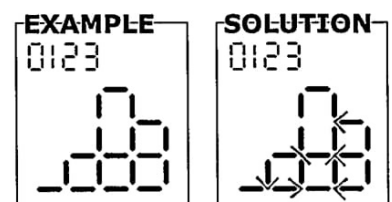
Group 3

Hands and Numbers

Find the three identical tiles in the grid.

Digital

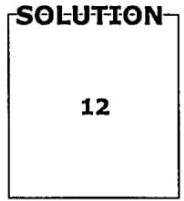
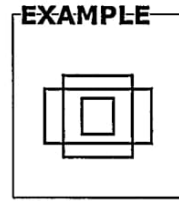
Each digit was used to compose the picture. Identify the position of each digit. The digits can be turned, but not mirrored.



Quadrilaterals

How many quadrilaterals are there in the picture?

Answers with difference up to 2 (inclusive), for more or less, will be considered as correct.



Pairs

Which two pairs of rectangles contain the same sets of objects?

Cartoon Sequence

The panels in this cartoon have been mixed up. Put them back in their logical order.



16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 12
team

INCREDIBLE OFFICE MACHINE

9th October 2007

16:00 - 17:30 (90 minutes)

Maximum score: 900 points + bonus

POINTS

Group	Right Answers	Points
1	1	900
Total		900

BONUS

		# First Teams				
		1	2	3	4	5...
Position	1 st	300	185	147	130	120
	2 nd		125	100	88	82
	3 rd			68	60	56
	4 th				42	39
	5 th					28

The Incredible Office Machine

Goal:

- Transfer the sphere from spot A to spot B in the longest time under 3 minutes.

Details:

- Spots A and B are given and are marked in the kit each team will receive. Other spots A and B cannot be used, only the ones given and previously marked;
- Spots A and B can be placed anywhere on the table (directly on it or on other structures composed by the teams);
- The sphere has to be at rest over spot A before the beginning of movement;
- The beginning of movement will happen by the removal, made by one of the competitors, of the obstacle that was preventing the sphere from moving (wedge, wall, support). The ball cannot begin moving as a result of a direct action from the competitor, that adds speed to the sphere (like pushing it or inclining the base where it is placed);
- The sphere cannot leave the table (competition area) nor touch the table directly;
- The course cannot take more than 3 minutes;
- The sphere has to stop at point B, not only pass by it;
- During the sphere course, no competitor can interfere with the assembled mechanism. All competitors must stay away from the table;
- The timing will start when the sphere leaves completely the object marked as spot A and the end of timing will be the exact moment when the sphere stops at point B;
- Only materials provided in the kit can be used;
- The table cannot be altered in any way (i.e. holes, dents, etc);
- The sphere and objects marked as spot A and spot B cannot undergo any transformation. The other objects can be broken, smashed, disassembled, cut, etc.

3.2



16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

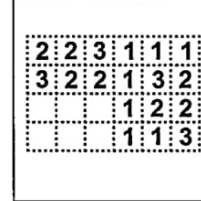
PART 13
individual

SEMIFINAL
10th October 2007
09:00 - 09:40 (40 minutes)

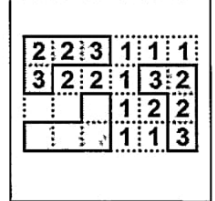
Tri-fences

Three single closed loops (exactly like Fences puzzles) can be drawn over the dotted lines in the diagram and have exactly the same shape (can be rotated but not mirrored). Each number shows how many segments are used in that square. The three fences cannot touch each other, not even diagonally.

EXAMPLE



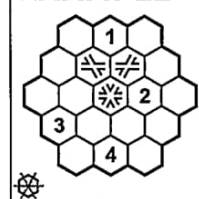
SOLUTION



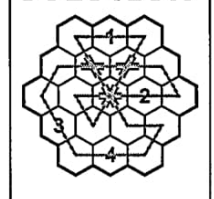
Railroad Track

Lay a single, closed loop of railroad track that levels through every cell of the grid. The track connects cells horizontally or diagonally, and crosses itself only in the cells with crosses (all the crossings are already placed). The track does not turn as it passes through the stations (which are the cells containing numbers) nor crosses. As you follow the track, visit all stations in numerical order and return to the first station.

EXAMPLE



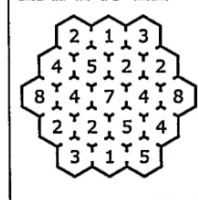
SOLUTION



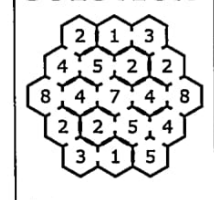
Doors

The floor has been divided into many rooms, which are all interconnected by doors. Some doors are open, others are closed. The rooms have numbers indicating how many other rooms can be looked into. Which doors are closed?

EXAMPLE



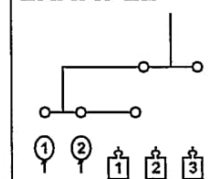
SOLUTION



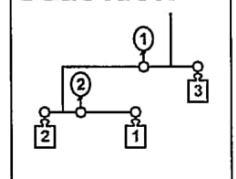
Balloon Balance

Add the weights and balloons to the diagram (in the white circles) so that the entire mechanism is in equilibrium. As happens with normal balance puzzles, the total torque at each fulcrum must be zero.

EXAMPLE



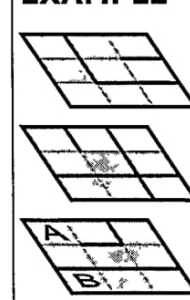
SOLUTION



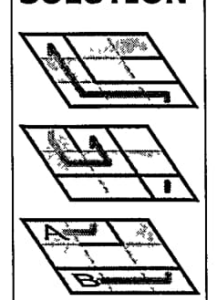
3D Maze

Cross the maze from A to B, through the different levels. It's only possible to change levels through the holes (white quadrilaterals).

EXAMPLE

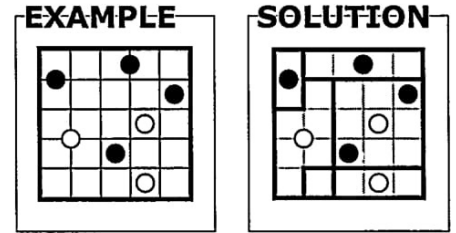


SOLUTION



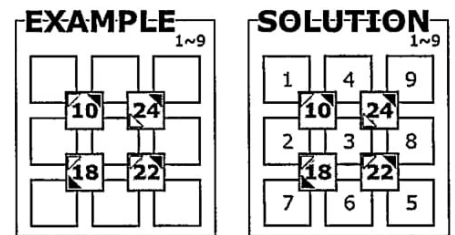
Rotator Mosaic

Divide the grid (along the grid lines) into exactly 10 symmetric pieces (each appearing unchanged if rotated 180°, including its shape and the pattern of any white or black disks). There are no two equal shapes (independent of the pattern). In the example, divide it into 6 symmetric pieces.



Biggest and Smaller

Place the numbers into the white cells so that the numbers in the gray cells are the sum of the numbers in the neighbouring white cells. The black arrows show the biggest of the neighbouring numbers (linked by the gray cell) and the white arrows show the smallest ones.





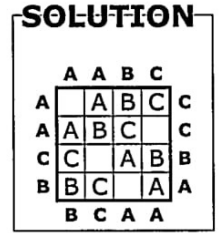
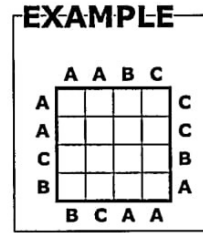
16TH
WORLD PUZZLE CHAMPIONSHIP
BRAZIL 2007

PART 14
individual

FINAL
10th October 2007
11:00 - 11:30 (30 minutes)

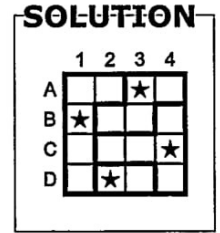
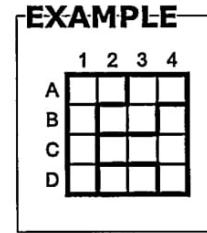
Easy as ABCDE

Every row and column in this grid contained A, B, C, D and E, although not necessarily in that order. Every letter outside the grid refers to the first of the four shapes encountered when travelling in that direction.



Star Battle

Mark several squares with stars so that there is an equal number of stars in each row, column and in each area surrounded by thick lines. Stars may not touch each other, not even diagonally. The number of stars in a row is one in the first puzzle and two in the second puzzle.

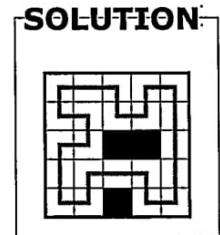
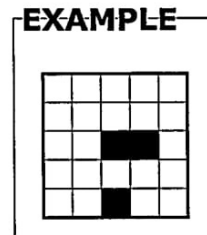


Japanese Pentomino

Place the pieces inside the diagram in such a way that they don't touch each other anywhere, not even diagonally. Individual pieces may be turned but not mirrored. The numbers outside the diagram indicate, in order, how many parts of the pieces each row or column contains.

The Final Loop

Draw a single line loop without crossing or overlapping itself, connecting the center of all adjacent white squares.



Hashiwokakero

Connect islands (the dots with numbers) with as many bridges as the number in the island. There can be no more than two bridges between two islands. Bridges cannot go across islands or other bridges. The bridges will form a continuous link between all the islands.

