

NAME:

POINTS:



8TH 24 HOURS PUZZLE CHAMPIONSHIP

17–18 NOVEMBER 2007

HOTEL BENTA

BUDAPEST

PUZZLES BY

BERNHARD SECKINGER

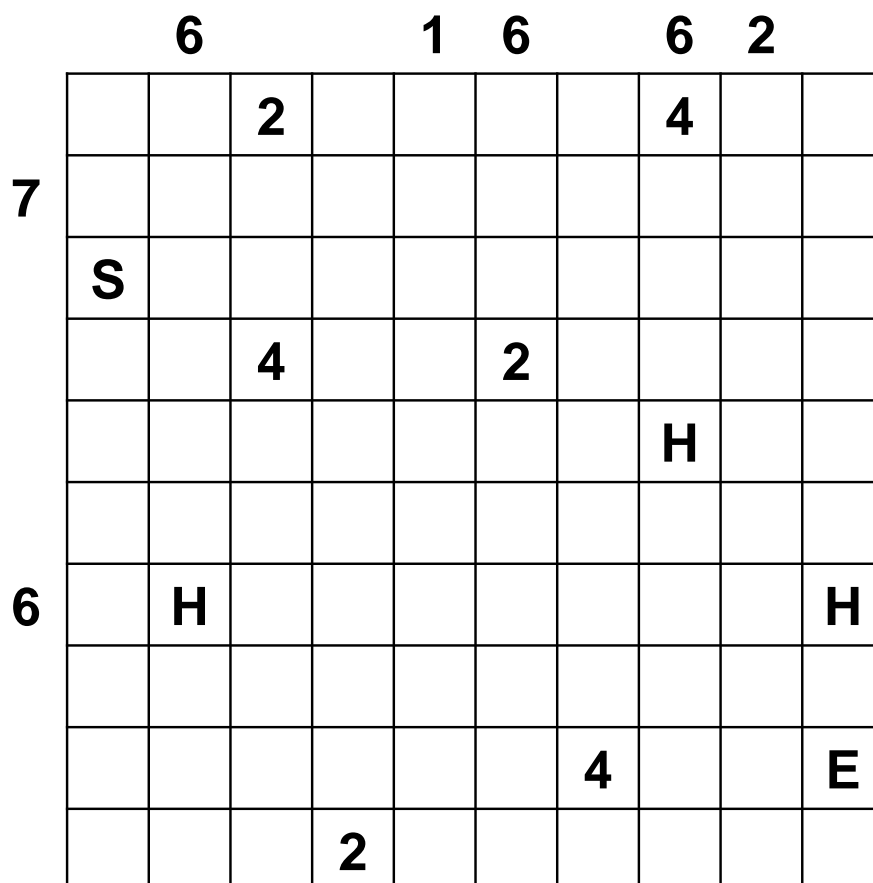
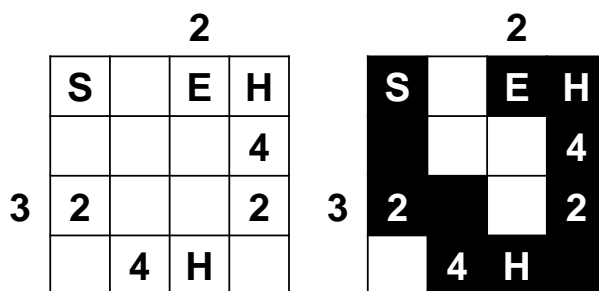
TESTSOLVERS

HELGE GROSS, IMMANUEL HALUPCZOK, KATRIN KADIOFSKY,
STEFAN LEOPOLDSIEDER, DANIELA MIESSL, IRENE QUERNER,
URMAS RAUDE, HARTMUT SEEBER, ROLAND VOIGT

24h-Snake	60 points
Pyramid	20 + 70 points
Anglers	20 + 40 points
Lasers	50 + 75 points
Fences and Posts	55 + 80 points
Magnets	40 + 130 points
As Easy as Skyscrapers	30 + 100 points
Overlapping Puzzles	100 points
Pentomino	130 points
<hr/>	
Total	1000 points

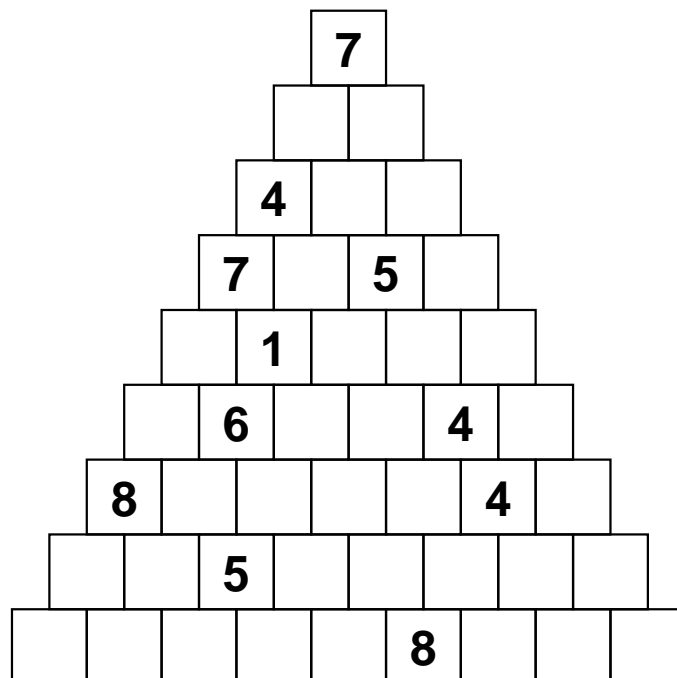
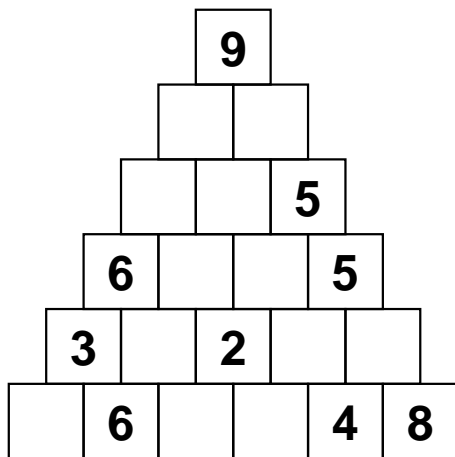
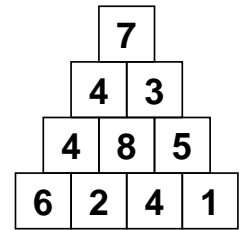
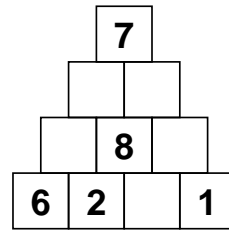
24H-SNAKE (60 POINTS)

A 24h-snake is hiding in the grid. The snake starts in the field marked with S, continues through the letters 2, 4 and H, repeating in this order and ends in the field marked with E. The snake never touches itself, not even diagonally. The numbers at the borders give the number of fields in the row/column, that are used by the snake.



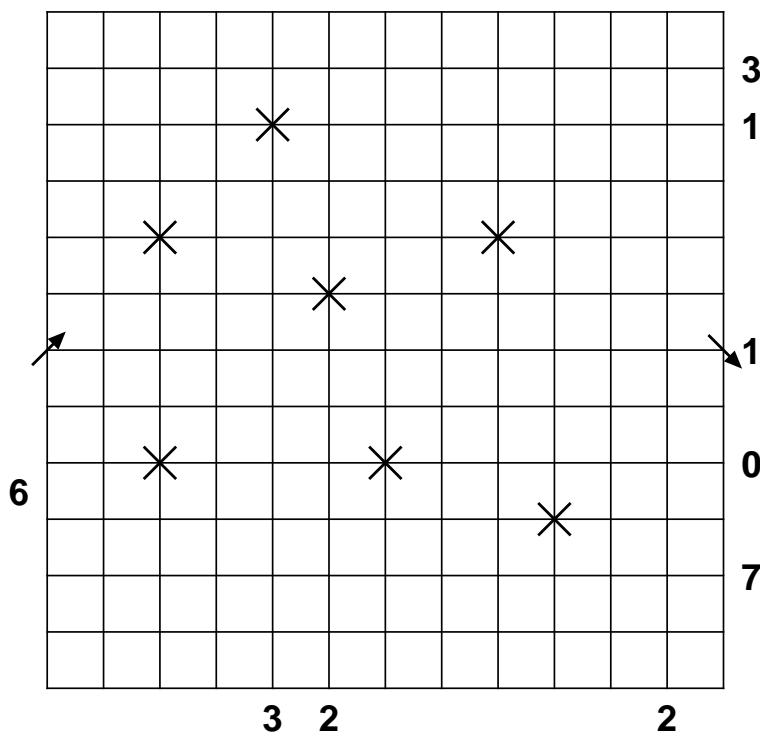
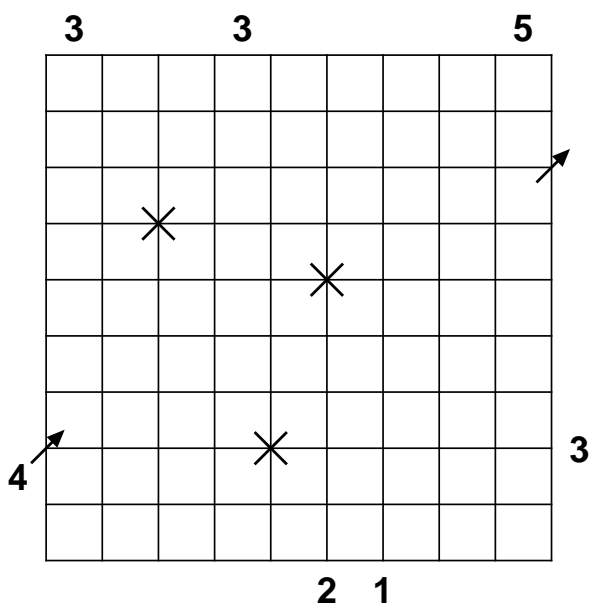
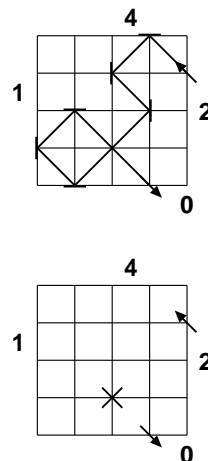
PYRAMID (20+70 POINTS)

Enter a digit from 1 to 9 into every field. Every field which is above two other fields must contain the sum, the difference *or the product* of the two numbers in the fields below. In every row all numbers are different.



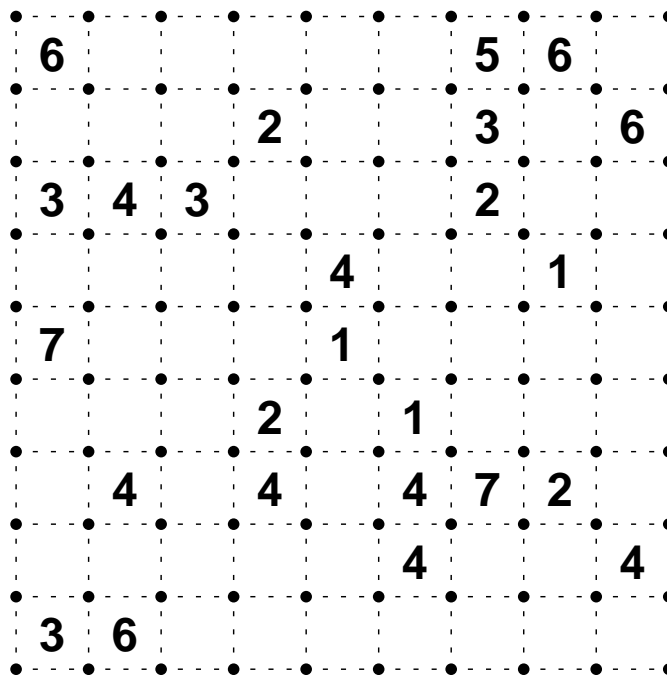
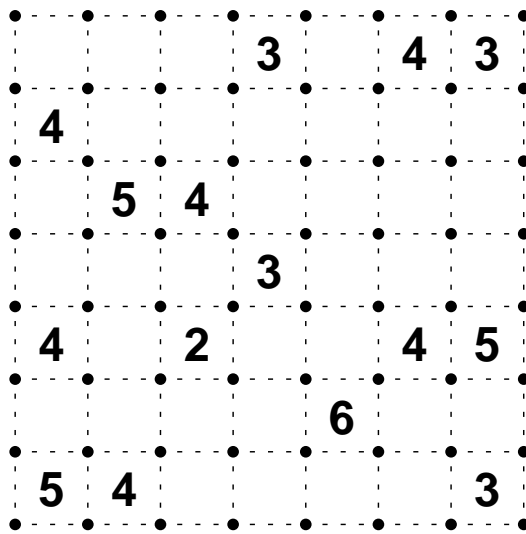
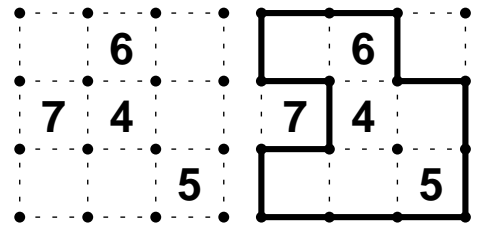
LASERS (50+75 POINTS)

The arrow pointing into the grid tells you where the laser beam enters. Draw horizontal and vertical mirrors on the intersections of the grid, such that the laser leaves the grid as indicated by the other arrow. The numbers on the left and top tell you how often the laser beam passes through a field of that row/column. The numbers on the right and bottom tell you how many mirrors you have to put on the corresponding line. The laser beam crosses itself only at the marked places. It meets each mirror exactly once.



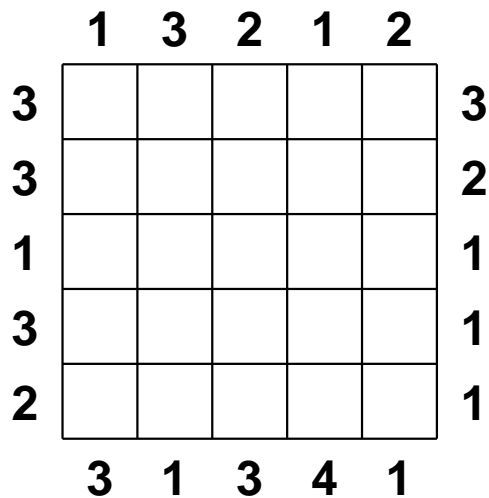
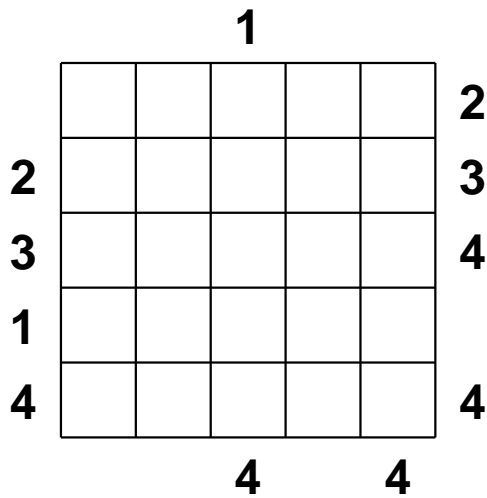
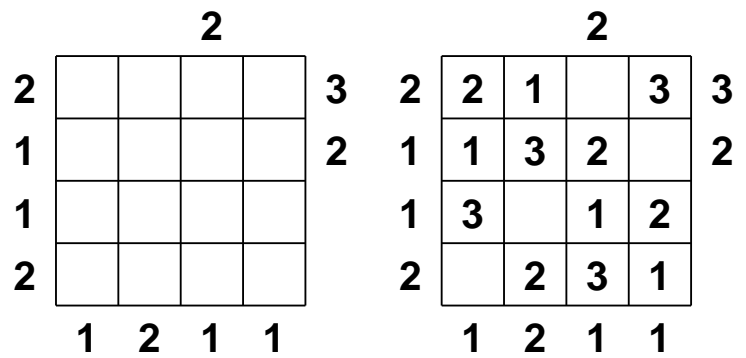
FENCES AND POSTS (55+80 POINTS)

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



AS EASY AS SKYSCRAPERS (30+100 POINTS)

Each row or column contains skyscrapers of different heights (from 1 to 4; in the example only 1 to 3) and an empty square; numbers outside the grid *either* indicate how many skyscrapers are visible from that direction *or* give the height of the first skyscraper seen from that direction (or both).



OVERLAPPING PUZZLES (100 POINTS)

Four puzzles are overlapping. Solve all four puzzles. Note: In the overlapping fields, only one number (or if both puzzles allow it, a blackend field) may be placed. The four puzzles may have several solutions. Points are only rewarded for solving all puzzles.

Japanese Sums: Blacken some fields and put digits from 1 to 5 into the other fields. No digit may occur twice in a row or column. The numbers at the top and at the left tell you the sum of consecutive digits (separated by black fields) in the correct order.

As easy as 1,2,3: Put every digit from 1 to 5 in every row/column exactly once and blacken the remaining fields. The digits at the borders tell you the first digit seen from that direction. Note: Digits in other puzzles do not count as digits at the borders.

Kropki: Put every digit from 1 to 5 in every row/column exactly once. Between two fields the following is true: Black circle: One number is twice the other. White circle: One number is larger by one than the other one. Not all circles are shown!

Fillomino: Put digits from 1 to 5 into the fields. All horizontally and vertically connected fields with the same digit form an area. The size of such an area must be the same as the numbers in this area tell you. There might be areas where no digit is given.

The image shows a 10x10 grid of overlapping puzzles. The puzzles are:

- Japanese Sums:** A 6x6 grid with row sums [4, 7, 3, 5], [15, 12, 3, 7, 7, 5] and column sums [6, 3, 12, 12, 1, 5, 4, 2, 10, 5, 5].
- As easy as 1,2,3:** A 6x6 grid with row numbers [3, 12, 12, 1, 5, 4] and column numbers [5, 4, 3, 3, 4, 2].
- Kropki:** A 6x6 grid with a black circle at (4,4)-(5,4) and white circles at (4,5)-(5,5), (5,6)-(6,6), and (6,7)-(7,7).
- Fillomino:** A 6x6 grid with numbers [2, 1], [3, 3], [2, 2, 1], [1, 3, 3], [2, 2, 3] in its cells.

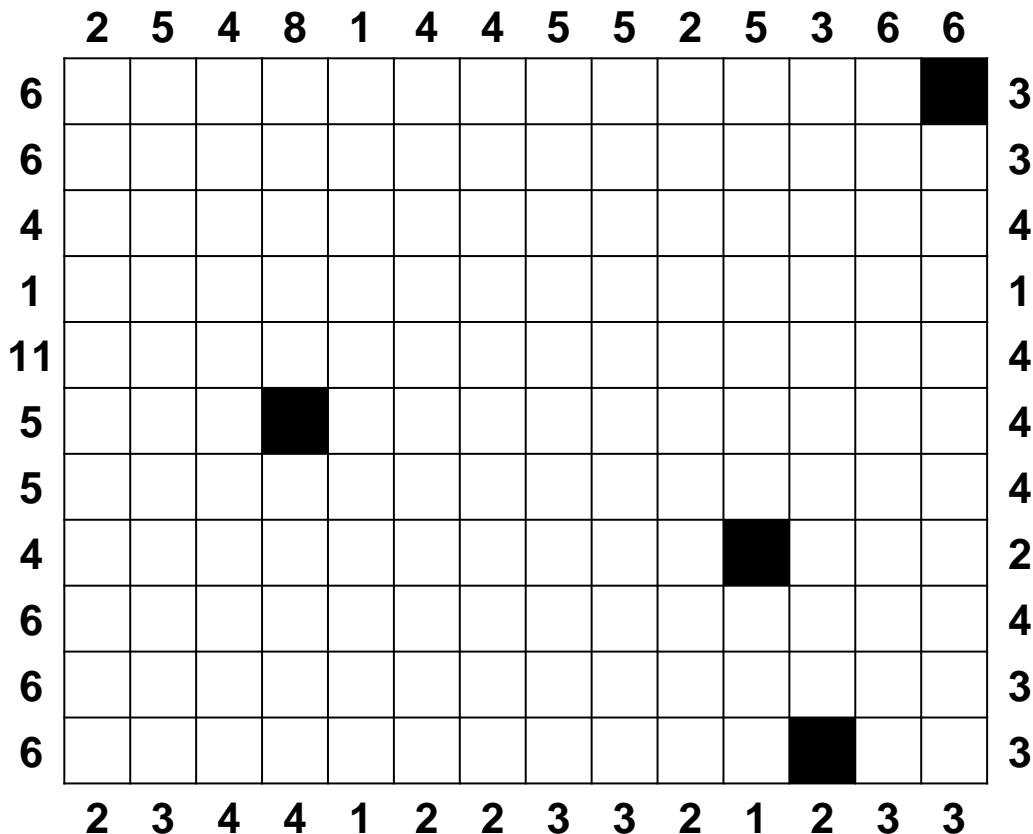
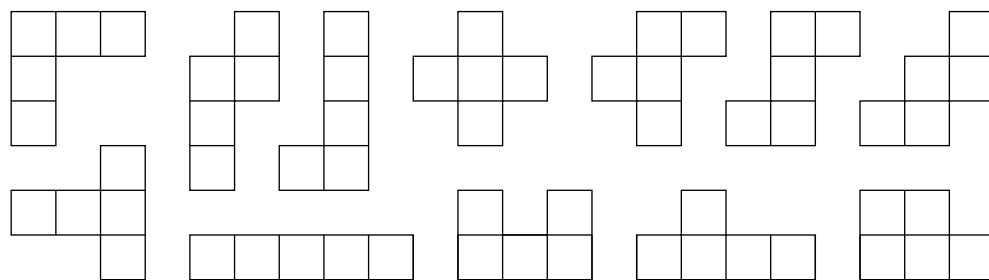
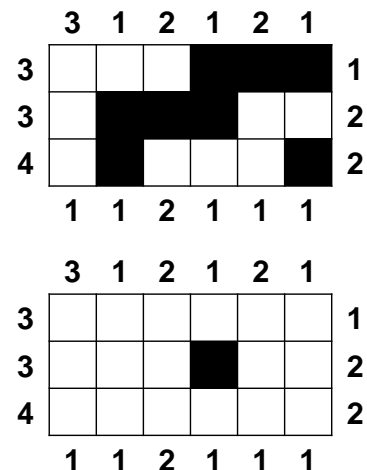
The grid also includes overlapping areas with numbers from other puzzles, such as the numbers 2, 1, 3, 3, 2, 2, 3 in the bottom right corner.

PENTOMINO (130 POINTS)

Place the 12 given pentominos into the grid and blacken all the other fields. The numbers at the top and at the left side give the number of fields in the corresponding row or column that are used by pentominos. The numbers at the bottom and at the right side give the number of pentominos that can be found in this row or column.

The twelve possible pentomino shapes are given below; each of them must be used exactly once, but they may be rotated and reflected. The pentominos may not touch each other, not even diagonally.

In the example, only two of the twelve pentominos are used.



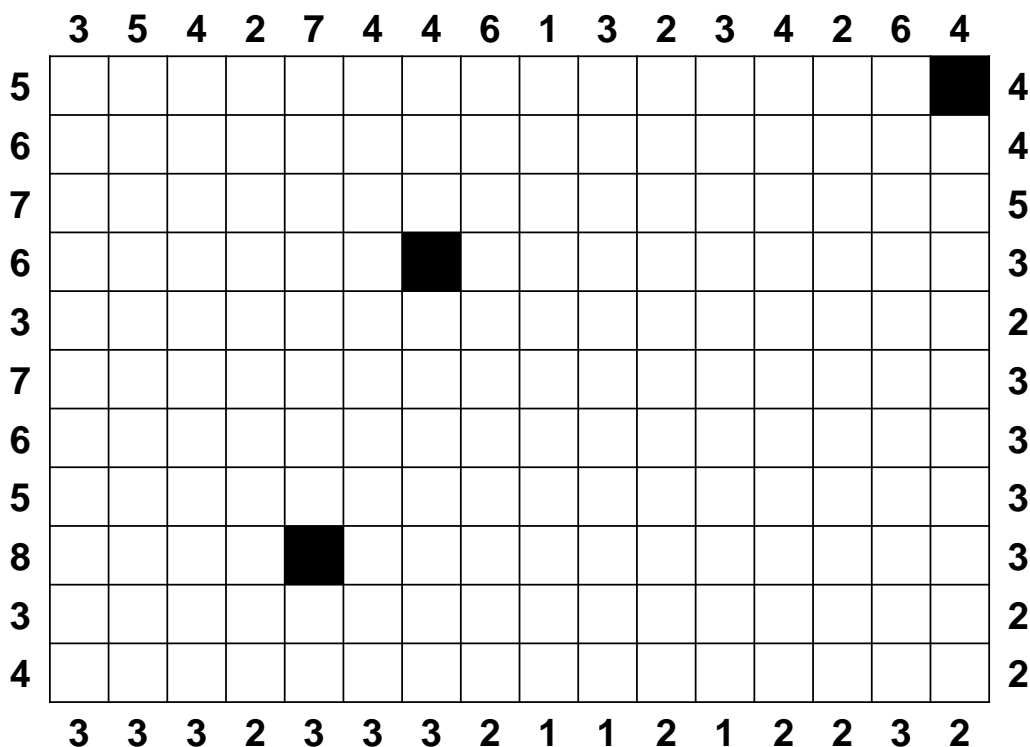
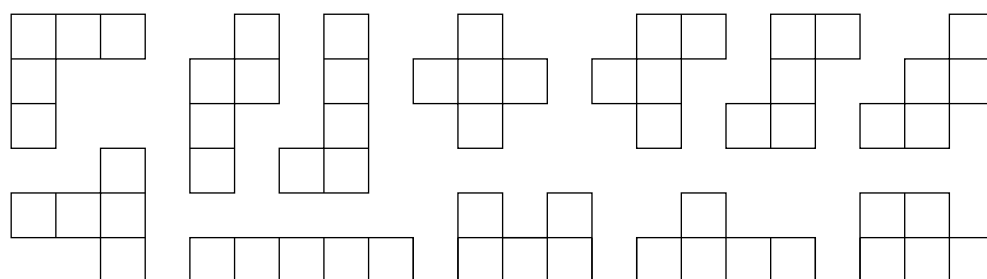
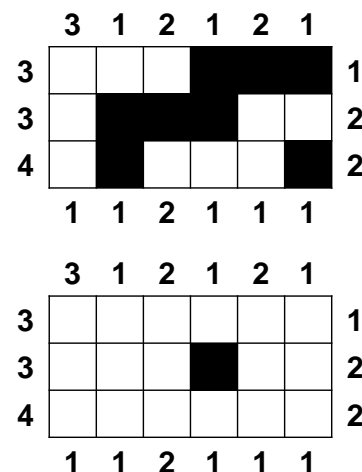
PENTOMINO (BONUS)

Remark: This puzzle has not been part of the championship, because one needs too much time to solve it. Anyway, the testsolvers who solved this puzzle liked it, so we added it for your convenience.

Place the 12 given pentominos into the grid and blacken all the other fields. The numbers at the top and at the left side give the number of fields in the corresponding row or column that are used by pentominos. The numbers at the bottom and at the right side give the number of pentominos that can be found in this row or column.

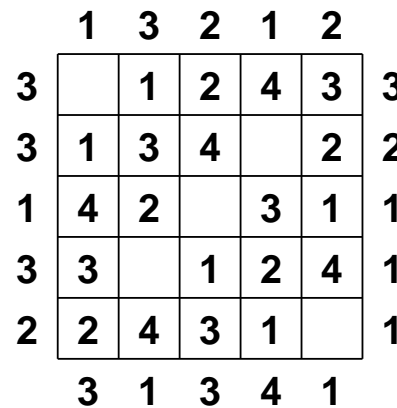
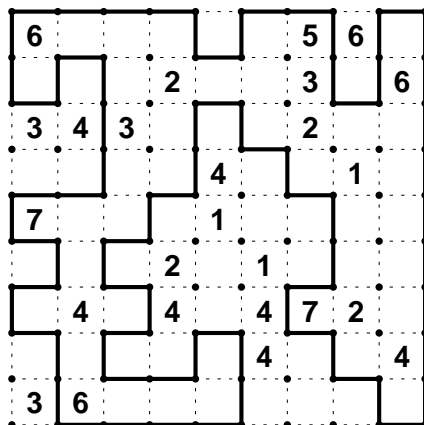
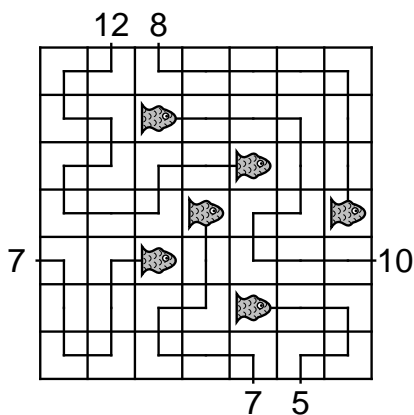
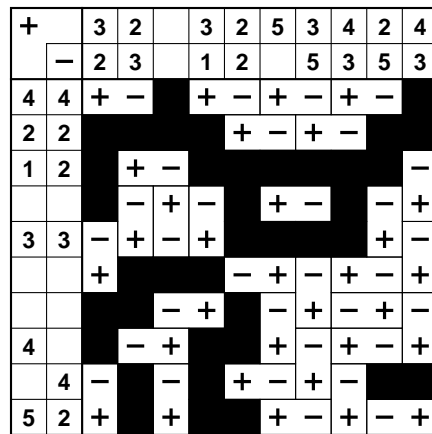
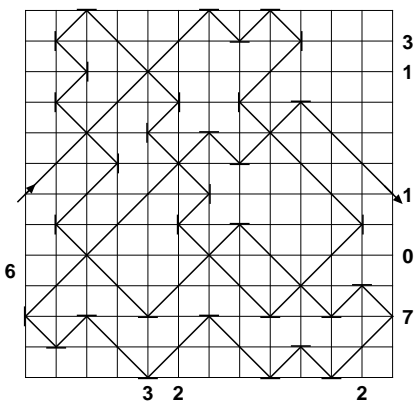
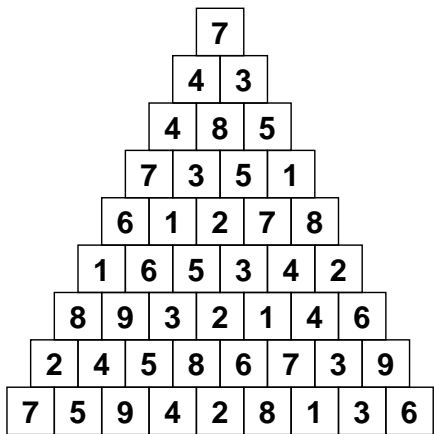
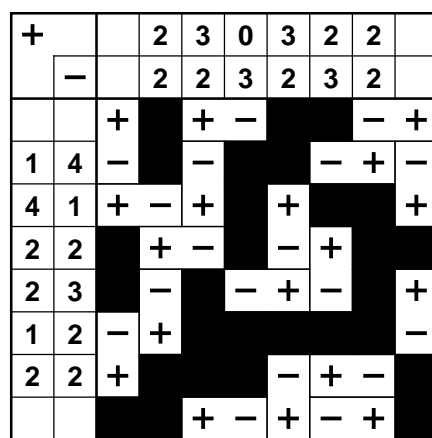
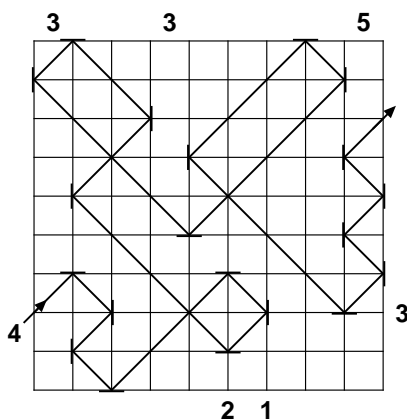
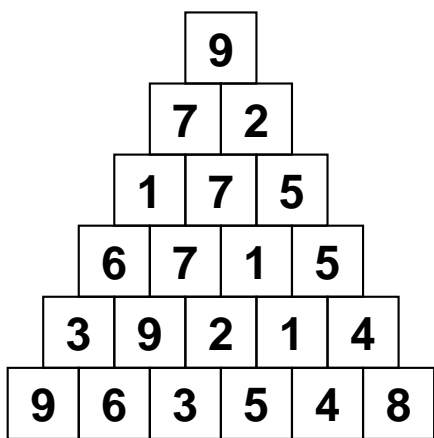
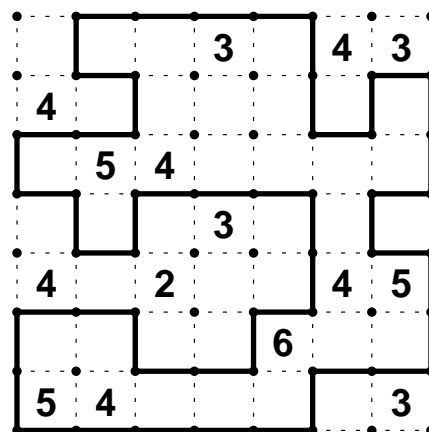
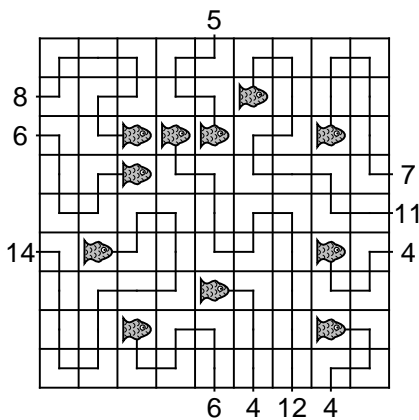
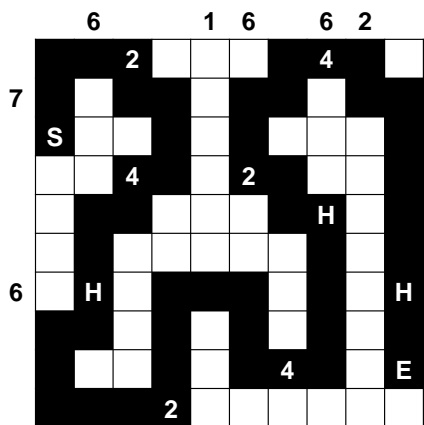
The twelve possible pentomino shapes are given below; each of them must be used exactly once, but they may be rotated and reflected. The pentominos may not touch each other, not even diagonally.

In the example, only two of the twelve pentominos are used.



Solution Booklet

(for the part of Bernhard Seckinger)



4 7 3 5
15 12 3 7 7 5

6			4	2																
3	12	2	1		5	3	4													
12	1	4	5	3				1												
5	4	3	2			4				3										
5	10	1	4		3	2	5	3	1	4										4
5	5	5			4	1		2	4	5	3									
					5	4		3	1	2										2
					3	3	2	4	5		1									
					4	3	1		2	5	1	4	3							
					1		1	5	2	3	4	5	2	1						
					4		5		4	1	2	3	5							
									5	2	3	1	4	4	4	4	4			
									1	3	4	5	2	2	3	1				
									5	1	3	3	2							
									5	2	2	1	2							
									5	5	3	3	3							

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

6																				3
6																				3
4																				4
1																				1
11																				4
5																				4
5																				4
4																				2
6																				4
6																				3
6																				3
	2	3	4	4	1	2	2	3	3	2	1	2	3	3						

