



www.logic-masters.de

## Logic Masters 2017 Round 7 – Shooting Gallery

Time: 30 minutes

$7.1~{\rm Kakuro}~\dots$	points
$7.2~{\rm Kakuro}~\dots$	points
7.3 Rekuto5	points
$7.4~{\rm Rekuto}~\dots$	points
7.5 Transposed Multi Loop 5	points
7.6 Transposed Multi Loop	points
$7.7~\mathrm{ABC}~\dots\dots\dots10$	points
7.8 ABC20	
7.9 Tapa10	
7.10 Tapa	
7.11 Touching Pentominoes	points
7.12 Touching Pentominoes20	points
Total	points
Bonus for every minute remaining 4	points

PUNKTE

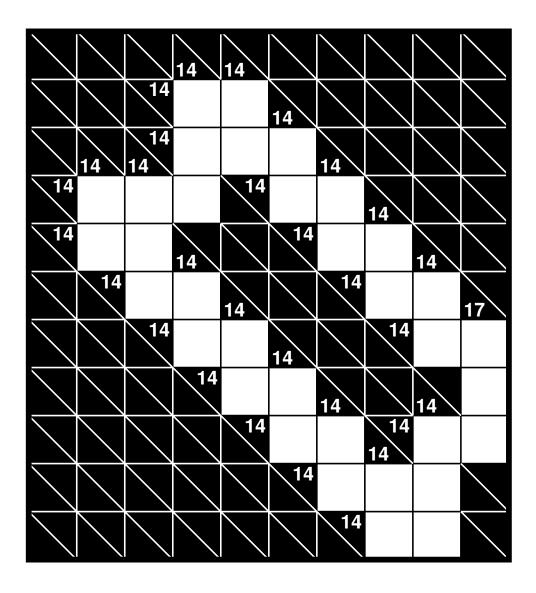
7.1 Kakuro 5 Punkte

Fill the grid with numbers from 1 to 9. Given numbers are the sum of all numbers in the respective row or column up to the next black cell. Within a sum, no number is repeated. **Caution:** Only one number is uniquely determined.

	22	23	24	25	
27					
28					
29					
30					

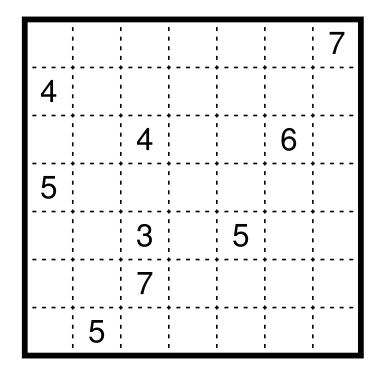
7.2 Kakuro 5 Punkte

Fill the grid with numbers from 1 to 9. Given numbers are the sum of all numbers in the respective row or column up to the next black cell. Within a sum, no number is repeated. **Caution:** Only one number is uniquely determined.



7.3 Rekuto 5 Punkte

Divide the grid along the dotted lines to create rectangles. Every rectangle contains exactly one number. The number is the sum of the height and width of the rectangle. **Caution:** Only one rectangle is uniquely determined.



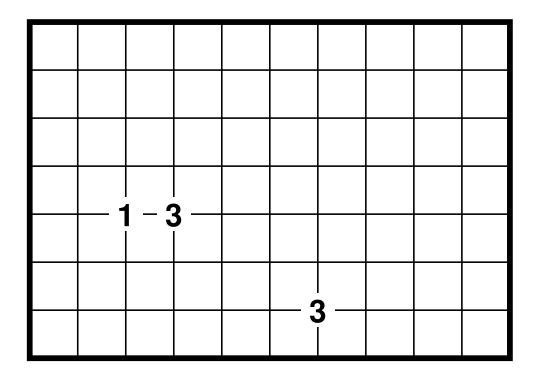
7.4 Rekuto 15 Punkte

Divide the grid along the dotted lines to create rectangles. Every rectangle contains exactly one number. The number is the sum of the height and width of the rectangle. **Caution:** Only one rectangle is uniquely determined.

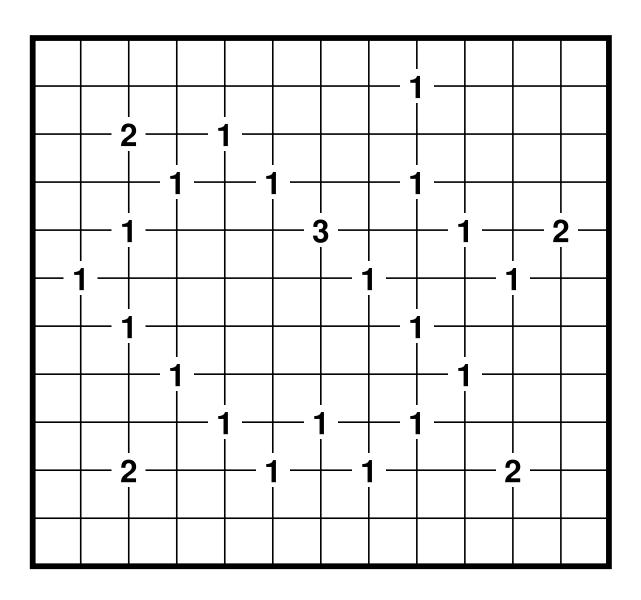
	3		4			3
				5		
4	3	3		3	4	3
						· · · · · · · · · · · · · · · · · · ·
	4	5			. <b></b> .	6
5				5		
			5			
	3		3		5	
3		3		3	• • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • •
		4		3		3

## 7.5 Transposed Multi Loop

Draw one or more loops into the grid connecting the centers of horizontally or vertically adjacent cells using every cell exactly once. Numbers appear on the intersections of the grid lines and determine how many different loops pass through the four adjacent cells. **Caution:** Only one loop is uniquely determined.



Draw one or more loops into the grid connecting the centers of horizontally or vertically adjacent cells using every cell exactly once. Numbers appear on the intersections of the grid lines and determine how many different loops pass through the four adjacent cells. **Caution:** Only one loop is uniquely determined.



7.7 ABC 10 Punkte

Replace the given letters by numbers from 1 to the number of letters such that different letters are replaced by different numbers and for every given word the sum of all letters equals the given sum. **Caution:** Only one letter is uniquely determined.

KREUZWORTRAETSELLOESER	111
KLETTERROSENWURZELSONARE	123
AEKLNORSTUWZ	

7.8 ABC 20 Punkte

Replace the given letters by numbers from 1 to the number of letters such that different letters are replaced by different numbers and for every given word the sum of all letters equals the given sum. Caution: Only one letter can be determined.

AA	۱L			9		
ES	SEL	_	1	8		
IL <sup>-</sup>	ΓIS		1	7		
EL	ST	EF	? 2	8		
Α	Ε	I	L	R	S	Т

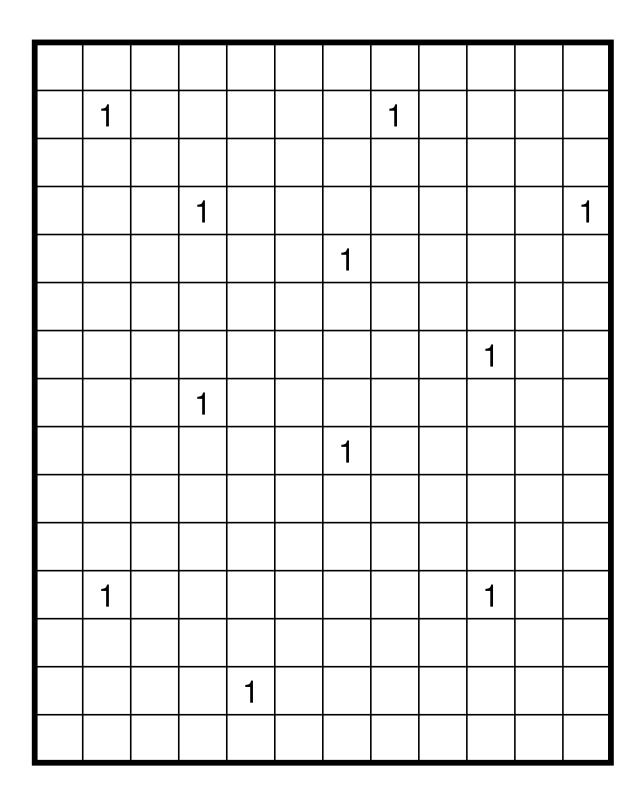
7.9 Tapa 10 Punkte

Blacken some empty cells such that all black cells are connected but no 2x2 area is blackened completely. Numbers determine the size of all groups in the eight adjacent cells. A group is a sequence of connected black cells. Different groups are separated by at least one white cell. The order of numbers in a clue cell is irrelevant. Caution: Only one black cell is uniquely determined. There may be unique white cells, but they are irrelevant for the puzzle.

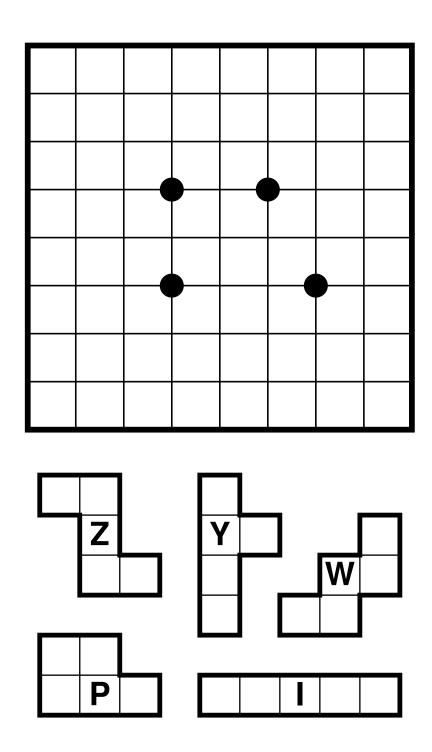
			5			
		4		4		
	4				4	
4				4		
	4		4			
		4				

7.10 Tapa 20 Punkte

Blacken some empty cells such that all black cells are connected but no 2x2 area is blackened completely. Numbers determine the size of all groups in the eight adjacent cells. A group is a sequence of connected black cells. Different groups are separated by at least one white cell. The order of numbers in a clue cell is irrelevant. **Caution:** Only one black cell is uniquely determined. There may be unique white cells, but they are irrelevant for the puzzle.



Place the given pentominoes in the grid. All points where two pentominoes touch each other diagonally are marked with circles. Pentominoes do not touch at any other points and do not share edges. There may be pentominoes that do not touch any of the circles. Pentominoes may be mirrored and rotated. **Caution:** Only one pentomino is uniquely determined.



Place the given pentominoes in the grid. All points where two pentominoes touch each other diagonally are marked with circles. Pentominoes do not touch at any other points and do not share edges. There may be pentominoes that do not touch any of the circles. Pentominoes may be mirrored and rotated. **Caution:** Only one pentomino is uniquely determined.

