## Round 1 - Welcome

## Time Limit: 20 Minutes

## Time Bonus: 1 Point for every 20 seconds

### 1.1 Slalom - 5 Points

Put a diagonal wall into every field, in a way that no completely closed areas occur. The numbers in the circles tell you, how many walls touch this circle.


Solution Code: Number of walls from lower left to upper right in each row. The answer for the example would be 2031 .

### 1.2 Pills - 5 Points

Draw 10 pills with values from 1 to 10 into the grid, so that each value occurs exactly once. Each pill has a size of $3 \times 1$ fields, and it's value is the sum of the numbers in it's fields. Hints at the border give the sum of the numbers belonging to a pill in that row or column. If there is no hint, the sum of the numbers belonging to a pill is unknown.

Example with pills from 1 to 3

|  | 1 | 1 | 3 | 1 |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 2 |
| 3 | 1 | 1 | 2 | 1 |
| 0 | 0 | 2 | 0 | 0 |
| 2 | 1 | 1 | 0 | 0 |



Solution Code: Number of fields belonging to a pill in each row. The answer for the example would be 1224 .

### 1.3 Yajilin - 10 Points

Blacken some fields in the grid so that blackened fields do not touch each other from the sides. All remaining fields should be traversed by a continuous loop, moving horizontally and vertically. Clues inside the grid indicate the number of blackened fields in the corresponding directions. There may exist some blackened fields that are not pointed by any arrow.


Solution Code: Number of blackened fields in each row. The answer for the example would be 111100.

### 1.4 Pentomino-Dissection - 10 Points

Divide the grid along the grid lines into pentominos. Each given pentomino has to be used exactly once, but can be mirrored and rotated. The sum of the numbers in each pentomino equals 10 . The puzzle file contains an image of the twelve pentominos.

Example with pentominos L, N, V, Z

| 1 | 2 | 3 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 1 | 1 | 1 | 1 |
| 3 | 4 | 1 | 1 | 1 |
| 5 | 2 | 1 | 2 | 4 |


| 1 | 2 | 3 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 1 | 1 | 1 | 1 |
| 3 | 4 | 1 | 1 | 1 |
| 5 | 2 | 1 | 2 | 4 |

Solution Code: Number of different pentominos in each row. The answer for the example would be 3342.

### 1.5 Heyawake - 15 Points

Blacken some fields of the grid, so that black fields don't touch each other. All white fields remain orthogonally connected. A hint inside a region gives the number of black fields in that region. Hints may be blackened, but still hold. No horizontal or vertical sequence of white fields may span more than two regions.


Solution Code: Number of blackened fields in each row. The answer for the example would be 11211.

### 1.6 ABC'tje - 20 Points

In the following words, replace the letters with numbers from 1 to 9 , same letters with the same number, different letters with different numbers. A hint on the right side gives the sum of the numbers of that word.

Example with letters B, E, I, L, P and S and numbers 1 to 6

$$
\begin{aligned}
& B=3 \\
& E=1 \\
& I=2 \\
& L=6 \\
& P=4 \\
& S=5
\end{aligned}
$$

Solution Code: The letters corresponding to the numbers 1 to 9 . The answer for the example would be EIBPSL.

### 1.7 Star Battle - 25 Points

Draw some stars into the grid so that each row, column and boldly outlined region contains exactly two stars. Stars have the size of one field and don't touch each other, not even diagonally.

Example with one star per column, row and region


Solution Code: Number of cells between the two stars in each row. (Not possible for example.)

### 1.8 Kropki - 35 Points

Fill the grid with numbers 1 to 9 , so that each number occurs exactly once in each row and column. A black dot means, that one of the adjacent fields has the double value of the other field. A white dot means, that the difference of the adjacent values equals 1 . If there is no dot, none of these conditions holds. If both conditions are true only one of the two dots is given.

Example with numbers 1 to 4


Solution Code: The two main diagonals, first from upper left to lower right, then from upper right to lower left. The answer for the example would be 13213112.

