# Mock test 20 <br> April 17, 2010-90 minutes 

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I would like to thank all the people who've helped me with the tournament preparation - with its pre-solving mainly!!

| Points table |  |  |
| :---: | :---: | :---: |
| Type of sudoku |  | Points |
| Absolutely potential sudoku |  | 16 |
| Diagonal sudoku |  | 9 |
| Even sudoku |  | 7 |
| Skyscrapers |  | 13 |
| 111 |  | 11 |
| Let's play with zeros |  | 7 |
| Diagonal Outside |  | 15 |
| Relay 1(+3 for both puzzles | Even sudoku | 3 |
|  | Skyscrapers | 4 |
| Relay 2$(+3$ for both puzzles) | Classic sudoku | 6 |
|  | 111 | 1 |
| Relay 3 ( +3 for these three puzzles) | Absolutely potential sudoku | 4 |
|  | Diagonal Outside | 4 |
|  | Diagonal sudoku | 2 |
| Bonus: 1 point / 1 minute | Total | 111 |

## Important Note

In this mock, you have to submit all 81 cells (for 9X9 Sudoku) and 36 cells for (6X6 Sudoku). There are 2 reasons for this.

- Given that we are very close to WSC, this mock should be similar to actual paper tournaments. So, you get 0 even if one cell is blank or incorrect.
- It is also an authoring issue. It would be probably sufficient to fill in only several numbers to get points, without solving the Sudoku completely.

This is unlike previous mocks where it was sufficient to submit only 2 rows or 2 columns or some selected cells.

## Absolutely potential sudoku

Apply standard diagonal sudoku rules.
Little circles mark all the pairs of adjacent numbers for which the following condition is valid: by exponentiation of one of the digits (the exponent can be on e of the digits 1-9) you can get the other one. Example: digits 3 and 9 are marked with a little circle because $3^{2}=9$.
Exclamations (lines) mark all the pairs of numbers adjacent in sides or corners, for which the following condition is valid: one of the digits is the factorial of the other one. Example: digits 3 and 6 are marked with an exclamation mark (a line), because $1 * 2 * 3=6$.

## Diagonal sudoku

Apply standard sudoku rules and moreover every diagonal contains the digits 0 to 8 .

## Even sudoku

Apply standard sudoku rules, besides, there can be only even numbers on yellow positions.

## Skyscrapers

Apply standard sudoku rules. Each number inside the grid represents the height of the scyscraper situated on the given field. Numbers outside the grid tell you how many scyscrapers you can see from that direction.

## 111

This is a classic sudoku in which there are all the sums of 11 marked with a line and all the differences of 1 are marked with a little circle. There is always a line between numbers 5 and 6.

## Let's play with zeros

Fill in the grid so that every row, every column, and every $3 \times 3$ box contains the digits 0 through 8 .

## Diagonal outside

Diagonal sudoku. The numbers outside the grid must be inserted in one of the three first position the corresponding row / column.

## Relay 1

It is composed of two $6 \times 6$ puzzles - Even sudoku and Skyscrapers. All the positions of the same numbers are marked in Skyscrapers sudoku.

## Relay 2

It is composed of two $6 \times 6$ puzzles - Classic sudoku and 111. All the positions of the same numbers are marked in Classic Sudoku.

## Relay 3

It is composed of three $6 \times 6$ puzzles - Diagonal sudoku, Diagonal Outside, Absolutely Potential Sudoku. All the positions of the same numbers moved from Absolutely Potential Sudoku are highlighted in yellow and all the positions of the same numbers moved from Diagonal Outside Sudoku are highlighted in green.

