SUDOKU SURPRISE

Hosted by Logic Masters India
November 2014

Puzzles set by David McNeill
Tested by Tom Collyer, Yuhei Kusui and Robert Vollmert

I was exhausted after the World Puzzle and Sudoku Championships. Whilst I had concentrated on setting puzzles for the WPC, Tom did an amazing job preparing Sudokus for the WSC. Following a period of recuperation, just for a change, I decided to try my hand at some new Sudoku ideas, and this is the result. Hopefully, Tom will have an opportunity to experiment with his puzzle ideas soon.

Anyhow, the test features 7 Sudoku types which we think might be new. This instruction booklet explains the rules of each type accompanied by an example. In the actual test, there will be 2 puzzles of each type, presented on a single page. The first puzzle will closely resemble the example. The second puzzle will not!

Details

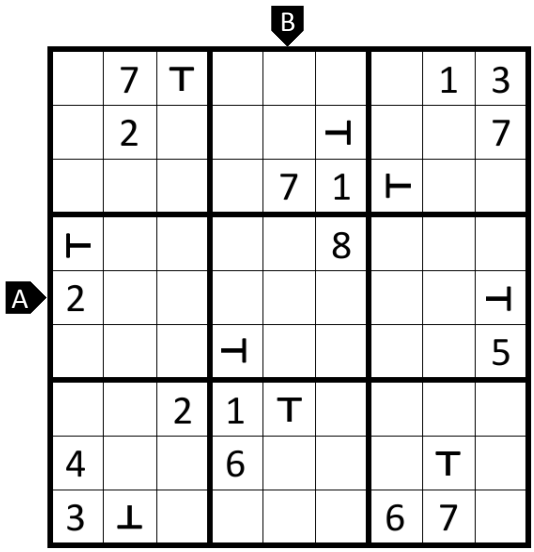
- The test will last for 150 minutes
- The test booklet will have 7 pages, each with 2 puzzles of the same type
- Each puzzle has a marked row and column for solution entry
- When submitting solutions, enter only the digits in the row/column in order, ignoring any symbols
- Instant grading and online solving are not available
- The puzzle points are shown in the table below
- Solvers who complete all puzzles correctly within the time can claim 10 bonus points for every full minute saved

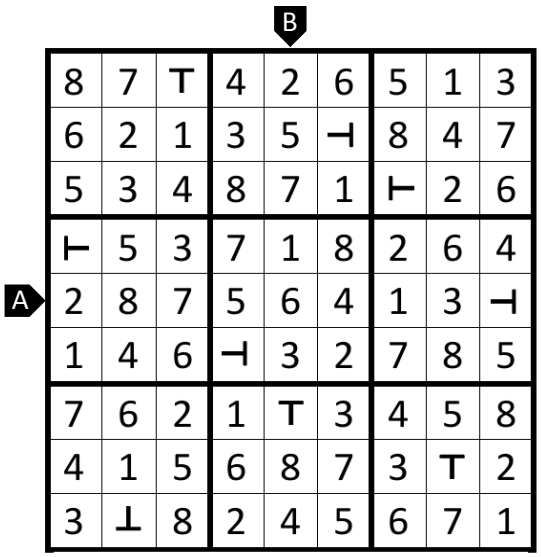
Points Table		
Puzzle		Points
1	Teetotal	70
2	Teetotal	80
3	Four in a Grow	40
4	Four in a Grow	130
5	Black and White Killer	70
6	Black and White Killer	180
7	Disparity	60
8	Disparity	280
9	Tee Product	80
10	Tee Product	140
11	Secret Code	70
12	Secret Code	140
13	Non-Consecutive Masyu	60
14	Non-Consecutive Masyu	100
Total Points		1500

We hope you enjoy the puzzles. Good luck.

Teetotal Sudoku

In the completed grid each row, column and 3×3 box contains the digits 1-8 and a letter T. The letter T can be orientated in any of the 4 cardinal directions. In addition, the digits in the 3 cells immediately adjacent to the arms of the letter T must add to the same total for each letter T.

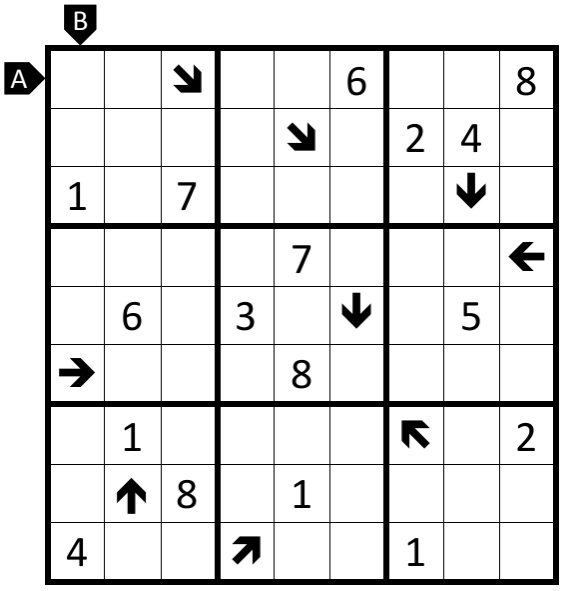


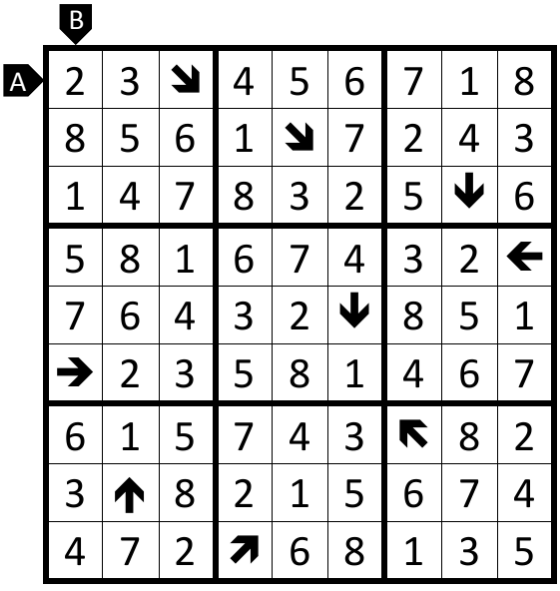


Solution key: 28756413, 25716384 Common Total: 12

Four-in-a-Grow Sudoku

In the completed grid each row, column and 3×3 box contains the digits 1-8 and an arrow. The arrow can point in any of 8 directions. In addition, the first 4 cells encountered along the path indicated by each arrow must contain 4 different digits in increasing order of size.

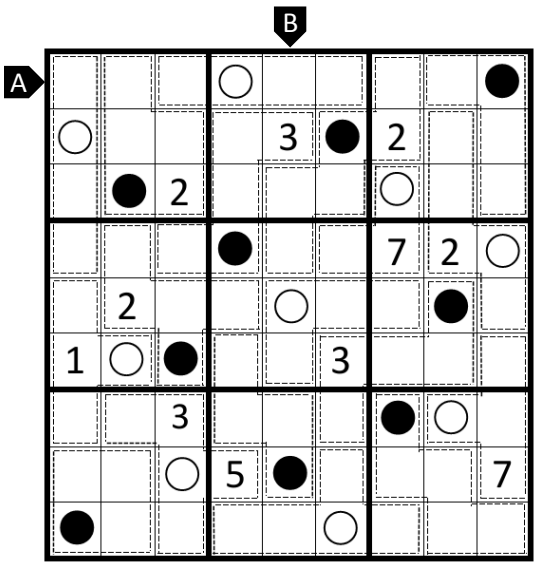


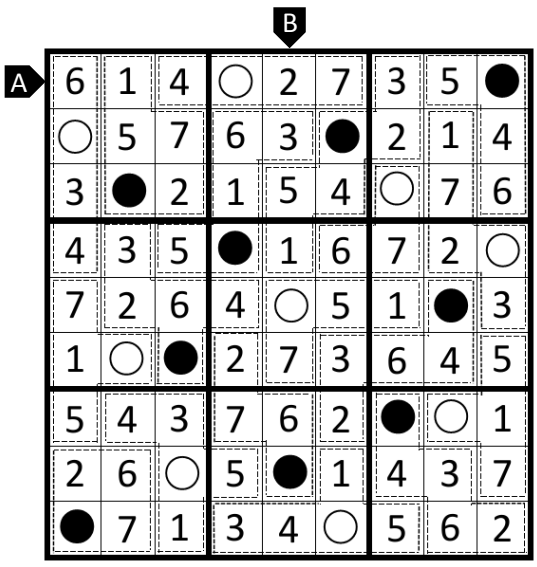


Solution key: 23456718, 28157634

Black and White Killer Sudoku

In the completed grid each row, column and 3×3 box contains the digits 1-7, a black circle and a white circle. In addition, the grid is entirely sub-divided into cages. Each cage contains exactly one circle and some digits. All cages with a black circle must have the same digit sum. Similarly, all cages with a white circle must have the same digit sum. The respective digit sums may or may not be different. Digits cannot repeat within a cage. The outlines of the cages may need to be completed.

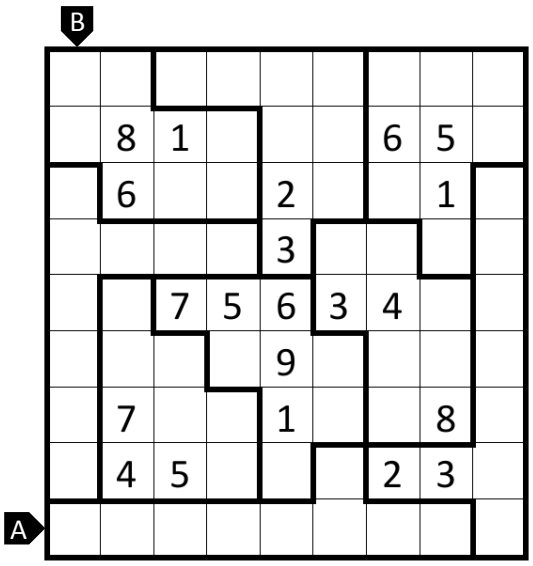


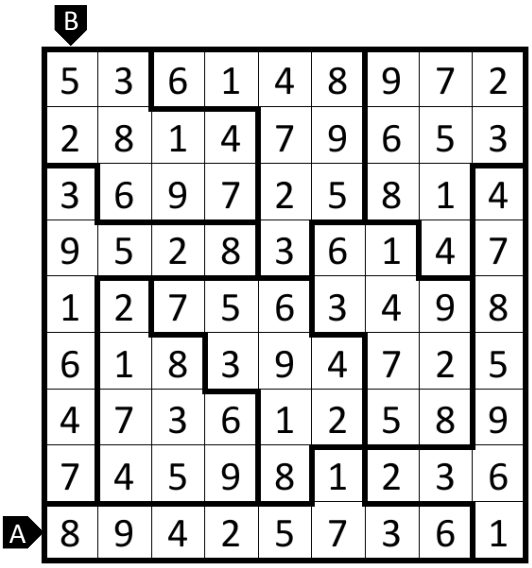


Solution key: 6142735, 2351764 Digit sums: ●15, ○13

Disparity Sudoku

In the completed grid each row, column and irregular region contains the digits 1-9. In addition, neighbouring cells in different regions must be of opposite parity. The outlines of the regions may need to be completed.

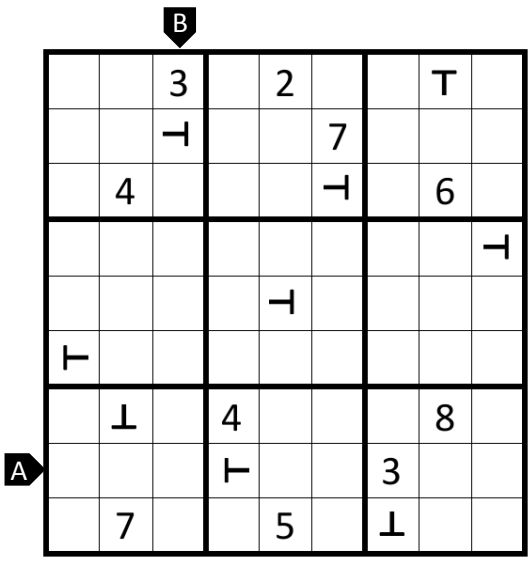


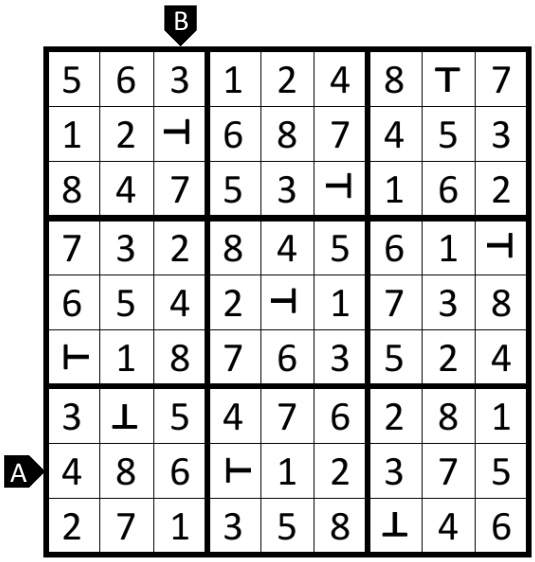


Solution key: 894257361, 523916478

Tee Product Sudoku

In the completed grid each row, column and 3×3 box contains the digits 1-8 and a letter T. The letter T can be orientated in any of the 4 cardinal directions. In addition, the 2-digit number reading from the stem of each letter T must be equal to the product of the two digits in the cells immediately adjacent to the side-arms of the letter T.

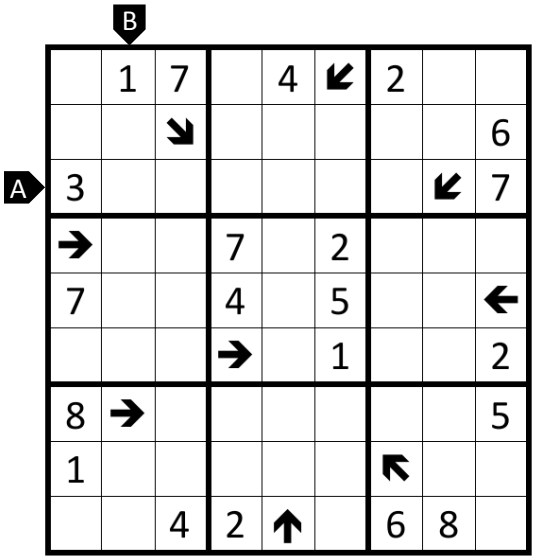


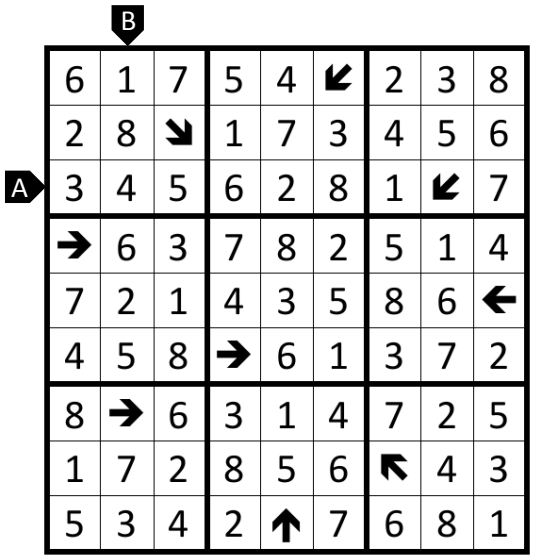


Solution key: 48612375, 37248561

Secret Code Sudoku

In the completed grid each row, column and 3×3 box contains the digits 1-8 and an arrow. The arrow can point in any of 8 directions. In addition, along the path indicated by each arrow the 3 digits of a secret code must be encountered in order but not necessarily in consecutive cells.

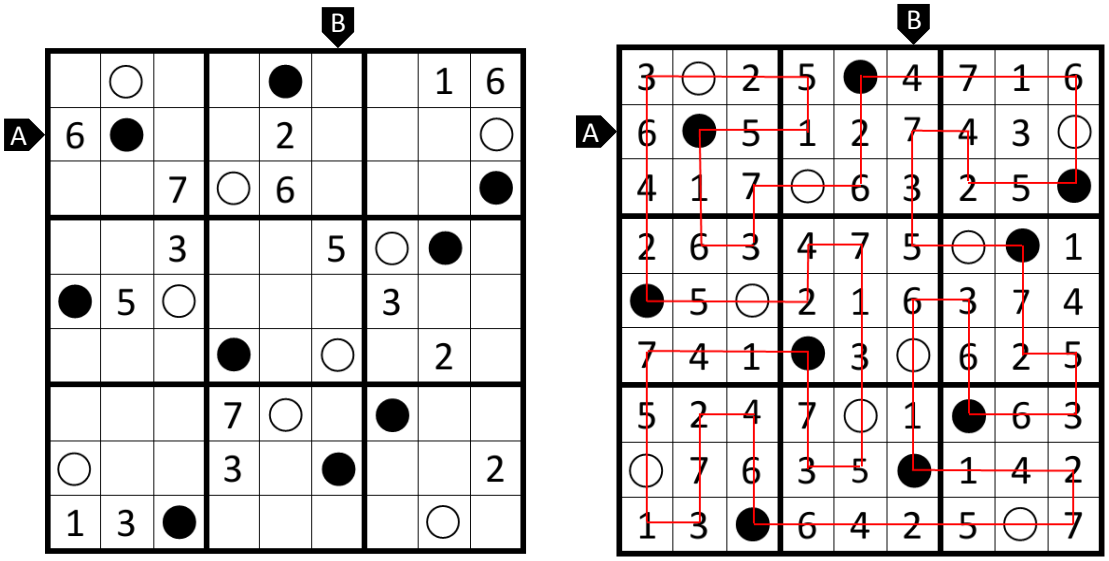




Solution key: 34562817, 18462573 Secret code: 632

Non-Consecutive Masyu Sudoku

In the completed grid each row, column and 3×3 box contains the digits 1-7, a black circle and a white circle. In addition, a loop must be drawn which visits each circle. The loop must pass straight through a white circle but turn in at least one of the neighbouring cells. The loop must turn at a black circle but cannot turn in either of the neighbouring cells. Along the loop, neighbouring cells cannot contain consecutive digits.



Solution key: 6512743, 4735612