# WCPN puzzle archive - April 2017

These are all the puzzles that are published on
wcpn.nl in April 2017, including solutions, puzzle
designers and difficulty level.

World Class Puzzles
from The Netherlands

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## SNAKE

03042017 - Hns - 1* - 1643

Find a snake in the grid
whose head and tail are
indicated by the grey
cells. The snake wriggles
horizontally and vertically
and never touches itself,
not even diagonally. The
digits outside the grid
indicate the number of
cells occupied by the
snake in that row or
column.



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## SUDOKU - next to nine

04042017 - Hns - 3* - 1644

Place the digits 1-9 in
each column, each row
and in all 3x3 regions. In
this Sudoku, the digits
on the outside indicate
which digits are directly
adjacent to the digit 9 in
that row or column. The
digits are not necessarily
listed in order.

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## JAPANESE SQUARE plus

05042017 - RS - 4* - 1645

Place digits 1–9 into the grid so that no digit is repeated within a row or column. Numbers outside the grid indicate the sums of contiguous blocks of digits in that row or column. Blocks have to be separated by at least one empty square. On each row and column three squares remain empty.

|   |   |   | 8 | 18 |   | 25 | 2 | 15 |   | 6 |   |   |   |
|---|---|---|---|----|---|----|---|----|---|---|---|---|---|
|   |   |   | 4 | 18 | 15 | 9 | 19 | 4 | 4 | 8 | 22 | 15 |   |
|   |   |   | 30 | 14 | 1 | 26 | 3 | 21 | 8 | 2 | 10 | 9 | 27 | 27 |
|   |   |   | 15 | 19 | 8 | 4 | 8 | 3 | 18 | 39 | 21 | 14 | 3 | 18 |
| 9 | 36 |   |   |   |   |   |   |   |   |   |   |   |   |
| 20 | 7 | 18 |   |   |   |   |   |   |   |   |   |   |   |
| 24 | 14 | 7 |   |   |   |   |   |   |   |   |   |   |   |
| 6 | 23 | 16 |   |   |   |   |   |   |   |   |   |   |   |
| 16 | 9 | 7 | 13 |   |   |   |   |   |   |   |   |   |   |
| 5 | 6 | 9 | 25 |   |   |   |   |   |   |   |   |   |   |
| 23 | 17 | 5 |   |   |   |   |   |   |   |   |   |   |   |
| 19 | 7 | 19 |   |   |   |   |   |   |   |   |   |   |   |
| 1 | 29 | 15 |   |   |   |   |   |   |   |   |   |   |   |
| 11 | 28 | 6 |   |   |   |   |   |   |   |   |   |   |   |
| 15 | 2 | 28 |   |   |   |   |   |   |   |   |   |   |   |
| 42 | 1 | 2 |   |   |   |   |   |   |   |   |   |   |   |

## SUDOKU - +3

06042017 - Hns - 4* - 1646

Place the digits 1-9 in each column, each row and in all 3x3 regions. **All** the places where the difference between two digits is 3 are marked with a circle.

## FILLED LOOP

07042017 - RS - 5* - 1647

Draw a single closed loop along the grid lines. The loop does not cross or touch itself. The numbers in the grid indicate how many sides of the cell are used for the loop. Fill the loop with the 12 pentominos; inside the loop are 60 cells. Adjacent pentominos touch each other at exactly one border segment. There are no points where three or more pentominos meet. Pentominos may be rotated and/or mirrored.
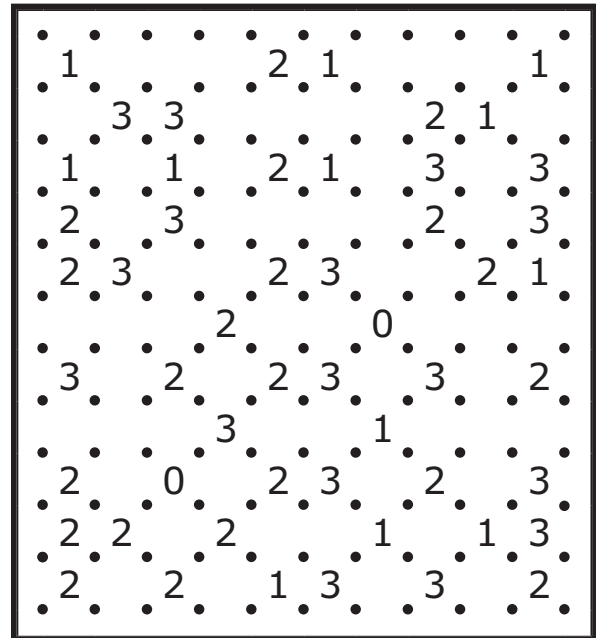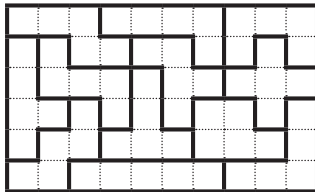
## CRAZY PAVING

10042017 - Hns - 3* - 1648

The grid is divided into a number of black outlined regions. Colour some cells so that each region is either completely filled or completely empty. Numbers on the outside indicate how many cells are coloured in that row or column.

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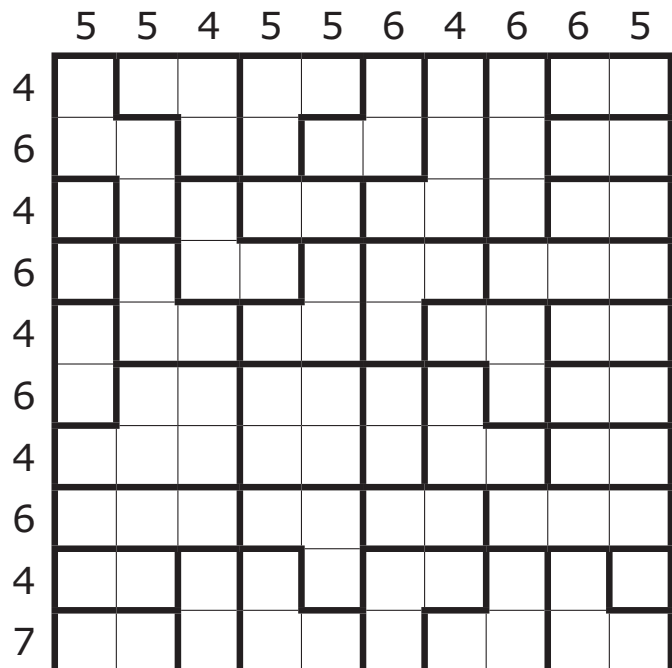
## BATTLESHIPS

11042017 - Hns - 4* - 1649

Place the given ships in the grid, so that they don't touch each other, not even diagonally. Numbers outside the grid indicate how many cells are occupied by ship segments.
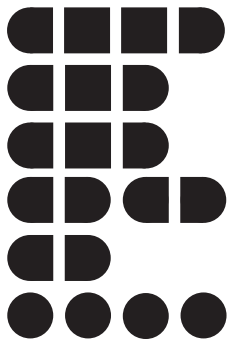


## TENTS aka CAMPING

12042017 - Hns - 3* - 1650

Attach a tent to each tree, in a horizontally or vertically adjacent cell. Cells with tents do not touch each other, not even diagonally. Numbers outside the grid indicate the number of tents in that row or column.

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## SUDOKU - renban

13042017 - RS - 3* - 1651

Place the numbers 1 to 9 on each row, in all columns and in the nine 3x3 regions. Numbers in coloured regions are consecutive.

| | | | | | | 2 | 7 | 9 |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | |
| | | | | 8 | 9 | | | |
| | | | | 1 | 2 | | | |
| | | 7 | 9 | | | | | |
| | | 1 | 3 | | | | | |
| 3 | | | | | | | 8 | |
| 7 | 4 | | | | | | 3 | 9 |
| 6 | | | | | | | | |

## ABC aka alphacipher

14042017 - RS - 5* - 1652

Every letter of the alphabet has a different value from 1 to 26. The numbers behind the words are the sum of the letters of that word.

| SAGA | 50 |
|---|---|
| SCORE | 111 |
| SELF | 89 |
| SEVEN | 98 |
| SEXY | 69 |
| SIZE | 66 |
| SKINK | 63 |
| SMILE | 74 |
| SOBER | 87 |
| SOUTH | 73 |
| SQUID | 77 |
| STOUT | 87 |
| STRONG | 111 |
| STUPID | 70 |
| STYLE | 95 |
| SWARM | 58 |

| A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |

| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |

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## DIFFERENT NEIGHBOURS

17042017 - RS - 2* - 1653

Place a digit from 1 to 4 in each black outlined region so that adjacent regions never contain the same digit, not even diagonally. Some regions have already been filled.
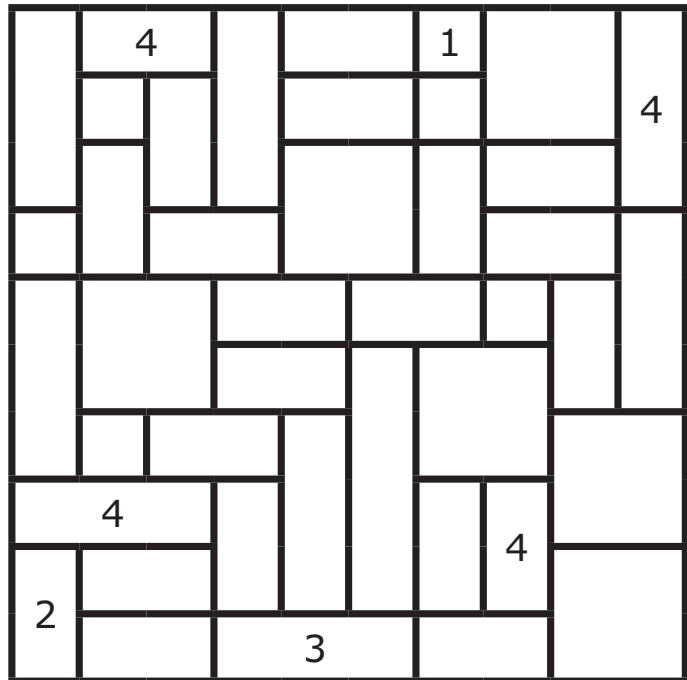


## SUDOKU - position

18042017 - RS - 2* - 1654

Place the digits 1-9 in each column, each row and in all nine 3x3 regions. Clues outside the grid indicate the position of the largest digit in the first three cells.

World Class Puzzles
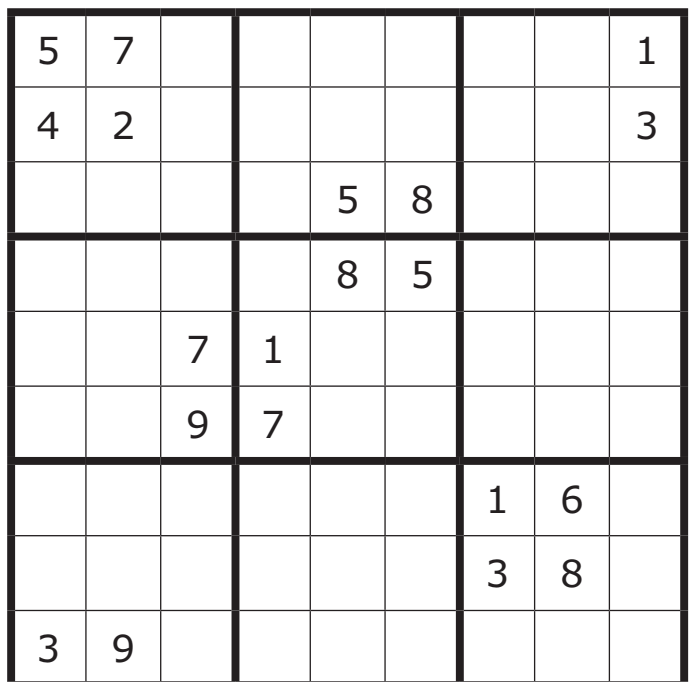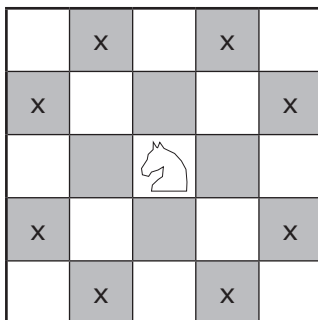from The Netherlands
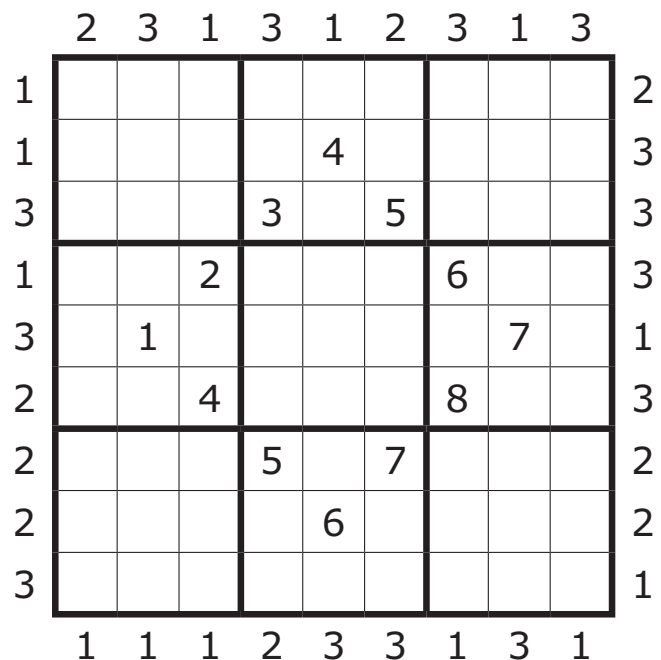
## NEIGHBOURS - skyscrapers

Place digits 1–3 in the grid so that in each row and column, each digit appears three times in the bold outlined 9x9-box. Numbers in grey cells do not share an edge with a cell containing the same number. Numbers in white cells share an edge with at least one cell containing the same number. All grey cells are given. Also, the digits in the bold outlined 9×9 box each represent skyscrapers of their respective heights. The digits outside the grid indicate how many skyscrapers can be seen in the respective row or column from the respective direction. (A skyscraper hides all skyscrapers behind it that are of equal or lower height.)
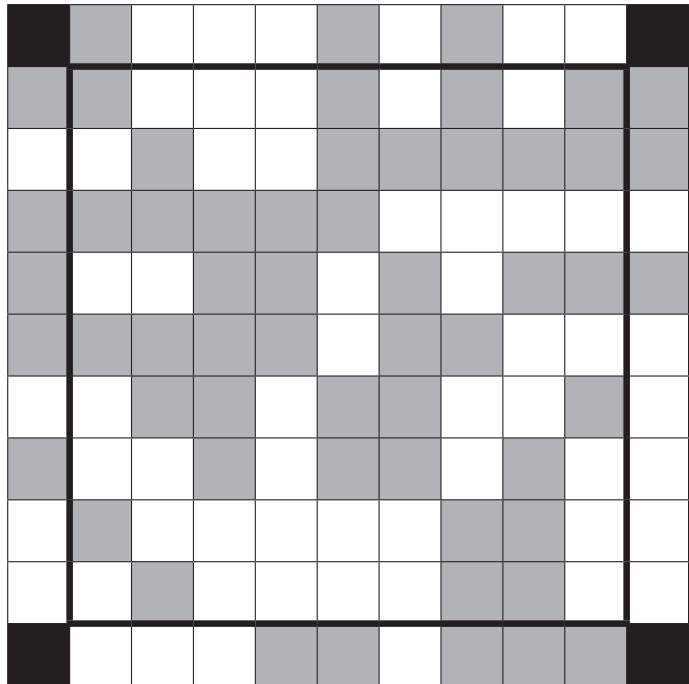
## SUDOKU - anti-knight

Place the digits 1-9 in each column, each row and in all nine 3x3 regions. No cell that is a knight-step (chess) away will contain the same digit.

|   | x |   | x |   |
|---|---|---|---|---|
| x |   | x |   | x |
|   | x | ♞ | x |   |
| x |   | x |   | x |
|   | x |   | x |   |

| 5 | 7 |   |   |   |   |   |   | 1 |
|---|---|---|---|---|---|---|---|---|
| 4 | 2 |   |   |   |   |   |   | 3 |
|   |   |   |   | 5 | 8 |   |   |   |
|   |   |   |   | 8 | 5 |   |   |   |
|   |   | 7 | 1 |   |   |   |   |   |
|   |   | 9 | 7 |   |   |   |   |   |
|   |   |   |   |   |   | 1 | 6 |   |
|   |   |   |   |   |   | 3 | 8 |   |
| 3 | 9 |   |   |   |   |   |   |   |

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## RIPPLE EFFECT
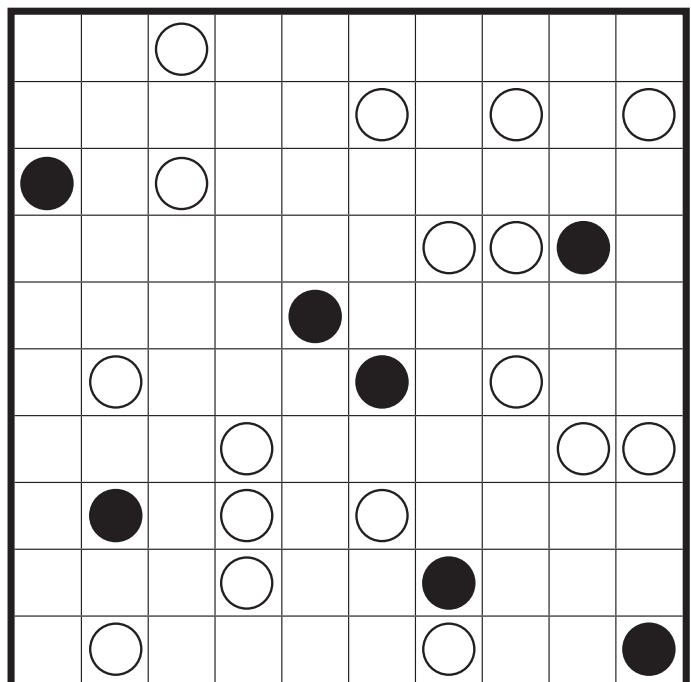
21042017 - RS - 3* - 1657

Every black bordered shape must contain the consecutive integers from 1 to the quantity of cells in that shape. If two identical numbers appear in the same row or column, at least that many cells with other numbers must separate them. For example, two cells both containing '3' must have at least three cells with other numbers between them in that row or column.
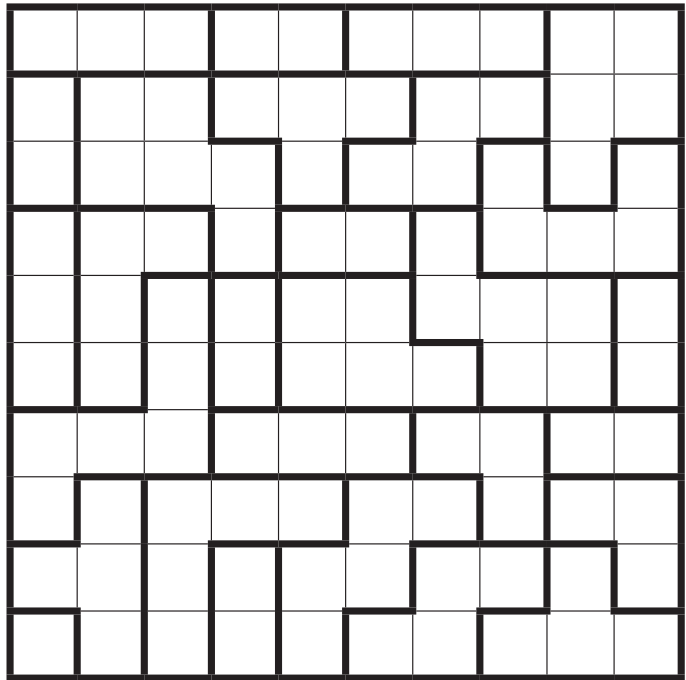
## MASYU

24042017 - RS - 2* - 1658

Draw a single closed loop that travels horizontally and vertically, passing through all circles in the grid. The loop must make a 90° angle in all black circles and go straight for at least two cells in both directions before turning again. The loop must go straight through all white circles and make a 90° angle in at least one of the neighboring cells.

## SUDOKU - Rossini

Place the digits 1-9 in each column, each row and in all 3x3 regions. Arrows outside the grid indicate that the first three digits are in ascending or descending order - the highest digit is at the sharp end of the arrow. If there is no arrow outside the grid the first three digits cannot be ordered in either ascending or descending order.
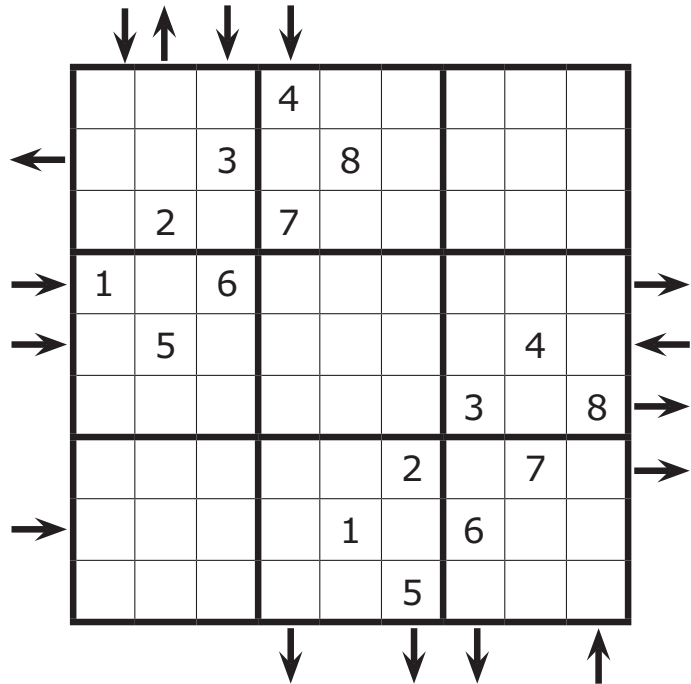
## LITS

Shade exactly four cells in each of the outlined regions so that they are orthogonally interconnected within the region and form one of the given shapes. Identical pieces may not touch each other orthogonally. Tetrominoes may be rotated and reflected, however they are still considered as the same type. All the shaded cells must be interconnected. Shaded cells cannot form a 2x2 square.

World Class Puzzles
from The Netherlands
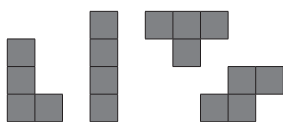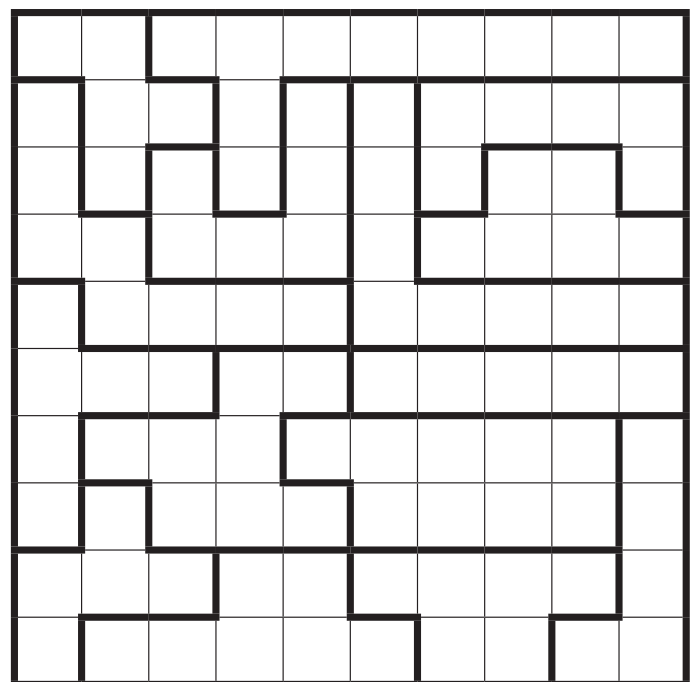
## SUDOKU - prime sums

27042017 - RS - 4* - 1661

Place the digits 1-9 in each column, each row and in all 3x3 regions. A dot means that the sum of the digits in the two neighbouring cells is a prime number. All possible dots are placed in the grid.



## NEIGHBOURS

28042017 - Hns - 4* - 1662

Place digits 1–3 in the grid so that in each row and column, each digit appears three times. Numbers in grey cells do not share an edge with a cell containing the same number. Numbers in white cells share an edge with at least one cell containing the same number. All grey cells are given.

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from The Netherlands

### 03042017 - Hns - 1* - 1643
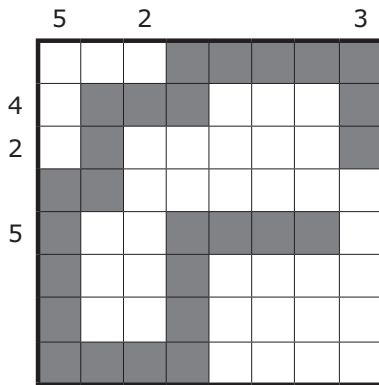


### 04042017 - Hns - 3* - 1644

|    | 25 | 45 | 15 | 78 | 15 | 7 | 28 | 67 | 2 |
|----|----|----|----|----|----|---|----|----|---|
| 78 | 2  | 1  | 4  | 5  | 8  | 9 | 7  | 3  | 6 |
| 8  | 9  | 8  | 6  | 3  | 4  | 7 | 2  | 5  | 1 |
| 46 | 5  | 7  | 3  | 2  | 1  | 6 | 9  | 4  | 8 |
| 46 | 1  | 5  | 7  | 6  | 9  | 4 | 8  | 2  | 3 |
| 38 | 3  | 9  | 8  | 1  | 5  | 2 | 6  | 7  | 4 |
| 15 | 6  | 4  | 2  | 8  | 7  | 3 | 1  | 9  | 5 |
| 13 | 4  | 2  | 1  | 9  | 3  | 8 | 5  | 6  | 7 |
| 37 | 8  | 3  | 9  | 7  | 6  | 5 | 4  | 1  | 2 |
| 8  | 7  | 6  | 5  | 4  | 2  | 1 | 3  | 8  | 9 |

### 05042017 - RS - 4* - 1645

|   | 5 | 4 |   | 7 | 2 | 9 | 3 | 6 | 1 | 8 |   |
|   | 2 | 5 | 9 | 4 |   | 6 | 1 |   | 8 | 7 | 3 |
| 3 | 1 | 9 | 2 | 5 | 4 |   |   | 8 | 6 |   | 7 |
| 6 |   |   | 3 | 9 | 8 | 1 | 2 |   | 7 | 4 | 5 |
| 9 | 4 | 2 | 1 |   | 6 | 3 |   | 7 |   | 5 | 8 |
| 5 |   | 6 |   | 8 | 1 |   | 7 | 3 | 2 | 9 | 4 |
| 4 | 6 | 7 | 5 | 1 |   | 8 | 9 |   | 3 | 2 |   |
| 2 | 8 | 3 | 6 |   | 7 |   | 5 | 9 | 4 | 1 |   |
| 1 |   |   | 8 | 3 | 5 | 7 | 4 | 2 |   | 6 | 9 |
|   | 3 | 1 | 7 |   | 9 | 2 | 8 | 4 | 5 |   | 6 |
| 8 | 7 |   |   | 2 |   | 4 | 6 | 5 | 9 | 3 | 1 |
| 7 | 9 | 8 | 4 | 6 | 3 | 5 |   | 1 |   |   | 2 |

### 06042017 - Hns - 4* - 1646
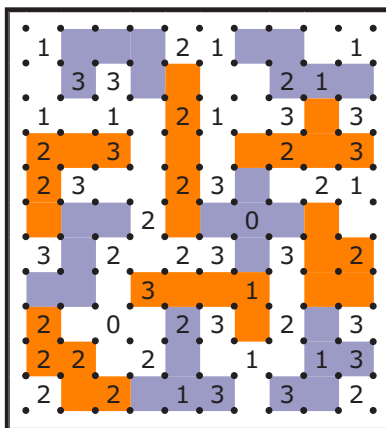


### 07042017 - RS - 5* - 1647



### 10042017 - Hns - 3* - 1648
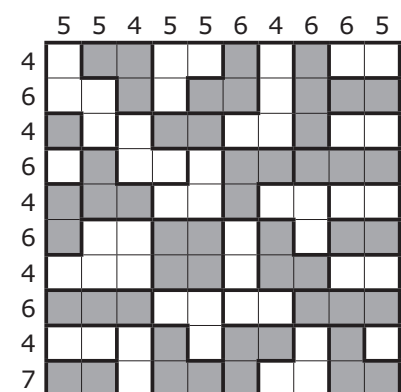


### 11042017 - Hns - 4* - 1649
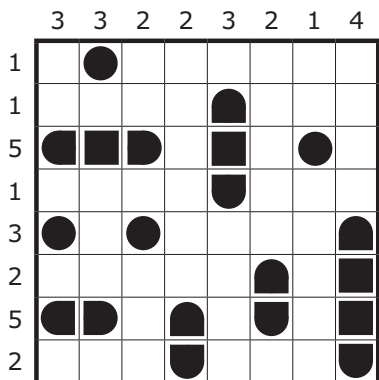


### 12042017 - Hns - 3* - 1650
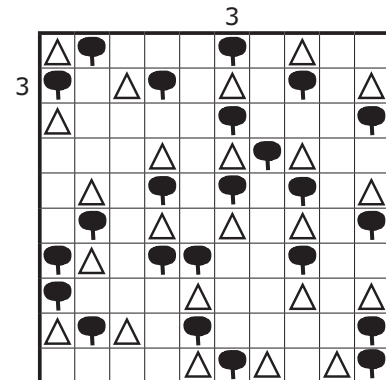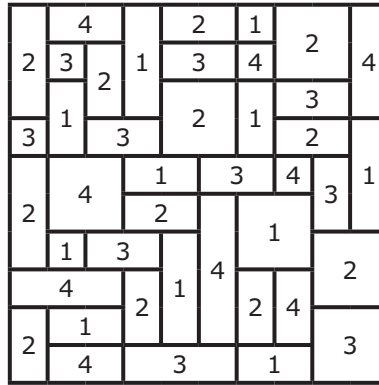


### 13042017 - RS - 3* - 1651

| 8 | 6 | 5 | 4 | 3 | 1 | 2 | 7 | 9 |
| 9 | 7 | 4 | 6 | 2 | 5 | 8 | 1 | 3 |
| 1 | 2 | 3 | 7 | 8 | 9 | 4 | 6 | 5 |
| 4 | 3 | 6 | 8 | 1 | 2 | 9 | 5 | 7 |
| 2 | 8 | 7 | 9 | 5 | 6 | 1 | 3 | 4 |
| 5 | 9 | 1 | 3 | 4 | 7 | 6 | 2 | 8 |
| 3 | 1 | 9 | 2 | 7 | 4 | 5 | 8 | 6 |
| 7 | 4 | 2 | 5 | 6 | 8 | 3 | 9 | 1 |
| 6 | 5 | 8 | 1 | 9 | 3 | 7 | 4 | 2 |

**14042017 - RS - 5* - 1652**

| A | B | C | D | E |
|---|---|---|---|---|
| 7 | 2 | 26 | 15 | 23 |
| **F** | **G** | **H** | **I** | **J** |
| 24 | 14 | 3 | 5 | 8 |
| **K** | **L** | **M** | **N** | **O** |
| 9 | 20 | 4 | 18 | 21 |
| **P** | **Q** | **R** | **S** | **T** |
| 1 | 25 | 19 | 22 | 17 |
| **U** | **V** | **W** | **X** | **Y** | **Z** |
| 10 | 12 | 6 | 11 | 13 | 16 |
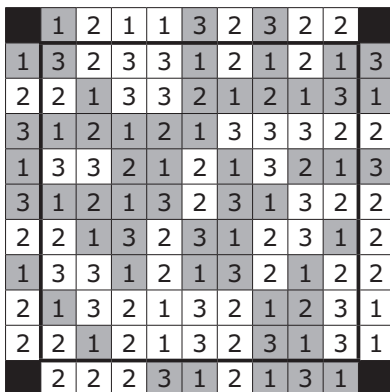
**17042017 - RS - 2* - 1653**
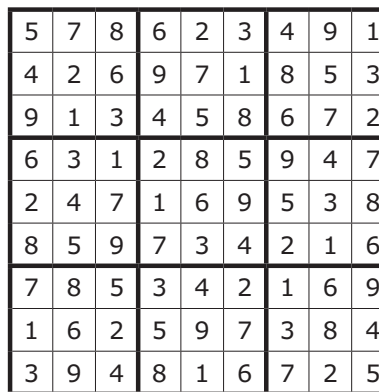
**18042017 - RS - 2* - 1654**

|   | 2 | 3 | 1 | 3 | 1 | 2 | 3 | 1 | 3 |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8 | 2 | 7 | 1 | 9 | 6 | 4 | 5 | 3 | 2 |
| 1 | 9 | 3 | 5 | 2 | 4 | 8 | 7 | 1 | 6 | 3 |
| 3 | 1 | 4 | 6 | 3 | 7 | 5 | 9 | 2 | 8 | 3 |
| 1 | 7 | 5 | 2 | 8 | 3 | 9 | 6 | 4 | 1 | 3 |
| 3 | 3 | 1 | 8 | 6 | 2 | 4 | 5 | 7 | 9 | 1 |
| 2 | 6 | 9 | 4 | 7 | 5 | 1 | 8 | 3 | 2 | 3 |
| 2 | 2 | 6 | 3 | 5 | 8 | 7 | 1 | 9 | 4 | 2 |
| 2 | 4 | 7 | 1 | 9 | 6 | 3 | 2 | 8 | 5 | 2 |
| 3 | 5 | 8 | 9 | 4 | 1 | 2 | 3 | 6 | 7 | 1 |
|   | 1 | 1 | 1 | 2 | 3 | 3 | 1 | 3 | 1 |   |

**19042017- RS - 3* - 1655**

| 1 | 2 | 1 | 1 | 3 | 2 | 3 | 2 | 2 |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 | 2 | 3 | 3 | 1 | 2 | 1 | 2 | 1 | 3 |
| 2 | 2 | 1 | 3 | 3 | 2 | 1 | 2 | 1 | 3 | 1 |
| 3 | 1 | 2 | 1 | 2 | 1 | 3 | 3 | 3 | 2 | 2 |
| 1 | 3 | 3 | 2 | 1 | 2 | 1 | 3 | 2 | 1 | 3 |
| 3 | 1 | 2 | 1 | 3 | 2 | 3 | 1 | 3 | 2 | 2 |
| 2 | 2 | 1 | 3 | 2 | 3 | 1 | 2 | 3 | 1 | 2 |
| 1 | 3 | 3 | 1 | 2 | 1 | 3 | 2 | 1 | 2 | 2 |
| 2 | 1 | 3 | 2 | 1 | 3 | 2 | 1 | 2 | 3 | 1 |
| 2 | 2 | 1 | 2 | 1 | 3 | 2 | 3 | 1 | 3 | 1 |
|   | 2 | 2 | 2 | 3 | 1 | 2 | 1 | 3 | 1 |   |

**20042017 - RS - 4* - 1656**

| 5 | 7 | 8 | 6 | 2 | 3 | 4 | 9 | 1 |
|---|---|---|---|---|---|---|---|---|
| 4 | 2 | 6 | 9 | 7 | 1 | 8 | 5 | 3 |
| 9 | 1 | 3 | 4 | 5 | 8 | 6 | 7 | 2 |
| 6 | 3 | 1 | 2 | 8 | 5 | 9 | 4 | 7 |
| 2 | 4 | 7 | 1 | 6 | 9 | 5 | 3 | 8 |
| 8 | 5 | 9 | 7 | 3 | 4 | 2 | 1 | 6 |
| 7 | 8 | 5 | 3 | 4 | 2 | 1 | 6 | 9 |
| 1 | 6 | 2 | 5 | 9 | 7 | 3 | 8 | 4 |
| 3 | 9 | 4 | 8 | 1 | 6 | 7 | 2 | 5 |

**21042017 - RS - 3* - 1657**

| 1 | 2 | 3 | 1 | 2 | 1 | 3 | 2 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 3 | 1 | 2 | 1 | 4 | 2 | 3 | 1 | 2 |
| 1 | 4 | 2 | 6 | 3 | 1 | 4 | 5 | 3 | 1 |
| 3 | 2 | 4 | 5 | 1 | 2 | 6 | 4 | 2 | 3 |
| 2 | 1 | 3 | 2 | 4 | 1 | 3 | 2 | 5 | 1 |
| 1 | 3 | 6 | 1 | 2 | 3 | 5 | 1 | 4 | 2 |
| 4 | 2 | 5 | 3 | 1 | 2 | 1 | 3 | 2 | 1 |
| 1 | 4 | 2 | 1 | 5 | 1 | 4 | 2 | 1 | 3 |
| 3 | 1 | 4 | 2 | 3 | 5 | 2 | 4 | 3 | 2 |
| 1 | 2 | 3 | 1 | 2 | 1 | 3 | 1 | 2 | 4 |
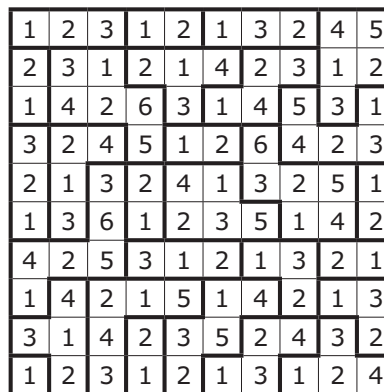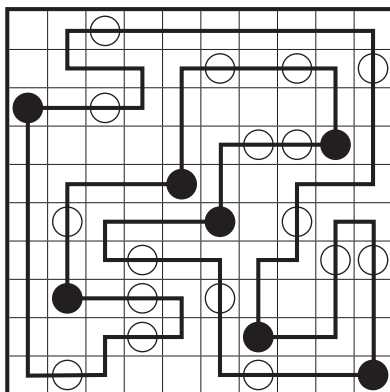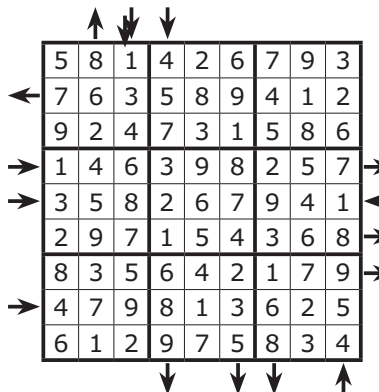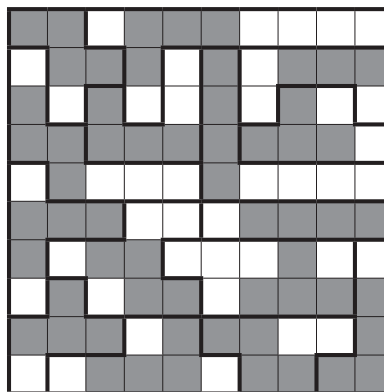
**24042017 - RS - 2* - 1658**

**25042017 - RS - 3* - 1659**

| 5 | 8 | 1 | 4 | 2 | 6 | 7 | 9 | 3 |
|---|---|---|---|---|---|---|---|---|
| 7 | 6 | 3 | 5 | 8 | 9 | 4 | 1 | 2 |
| 9 | 2 | 4 | 7 | 3 | 1 | 5 | 8 | 6 |
| 1 | 4 | 6 | 3 | 9 | 8 | 2 | 5 | 7 |
| 3 | 5 | 8 | 2 | 6 | 7 | 9 | 4 | 1 |
| 2 | 9 | 7 | 1 | 5 | 4 | 3 | 6 | 8 |
| 8 | 3 | 5 | 6 | 4 | 2 | 1 | 7 | 9 |
| 4 | 7 | 9 | 8 | 1 | 3 | 6 | 2 | 5 |
| 6 | 1 | 2 | 9 | 7 | 5 | 8 | 3 | 4 |

**26042017 - RS - 3* - 1660**

**World Class Puzzles**
from The Netherlands

27042017 - RS - 4* - 1661

| 7 | 9 | 1 | 5 | 3 | 6 | 8 | 4 | 2 |
|---|---|---|---|---|---|---|---|---|
| 2 | 6 | 8 | 9 | 1 | 4 | 3 | 5 | 7 |
| 5 | 3 | 4 | 2 | 8 | 7 | 6 | 9 | 1 |
| 1 | 5 | 9 | 6 | 4 | 3 | 2 | 7 | 8 |
| 8 | 2 | 6 | 7 | 5 | 1 | 9 | 3 | 4 |
| 4 | 7 | 3 | 8 | 9 | 2 | 1 | 6 | 5 |
| 3 | 4 | 5 | 1 | 6 | 8 | 7 | 2 | 9 |
| 6 | 8 | 2 | 4 | 7 | 9 | 5 | 1 | 3 |
| 9 | 1 | 7 | 3 | 2 | 5 | 4 | 8 | 6 |

28042017 - Hns - 4* - 1662

| 2 | 2 | 3 | 1 | 3 | 1 | 3 | 1 | 2 |
|---|---|---|---|---|---|---|---|---|
| 3 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 2 |
| 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 2 | 1 | 3 | 3 | 1 | 2 | 3 | 2 | 1 |
| 3 | 2 | 1 | 1 | 2 | 3 | 1 | 2 | 3 |
| 1 | 3 | 2 | 3 | 2 | 1 | 2 | 3 | 1 |
| 2 | 1 | 2 | 2 | 1 | 3 | 1 | 3 | 3 |
| 1 | 3 | 1 | 3 | 3 | 2 | 2 | 1 | 2 |
| 3 | 1 | 2 | 2 | 1 | 2 | 3 | 3 | 1 |

## Spring contest - solution

Ten friends know all one different joke. They can only communicate by phone. How many phonecalls have to be made before all friends know all jokes?

The solution is sixteen calls. There's a general rule: if the amount of friends (N) is 4 or more the solution is 2N-4.

Tom Groot Kormelink is the winner of the puzzle-related price. He will receive his award at June 17th, during the championships.

## puzzle authors
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## puzzle names
date (ddmmyyyy) - author - difficuty level - wcpn puzzle ID

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