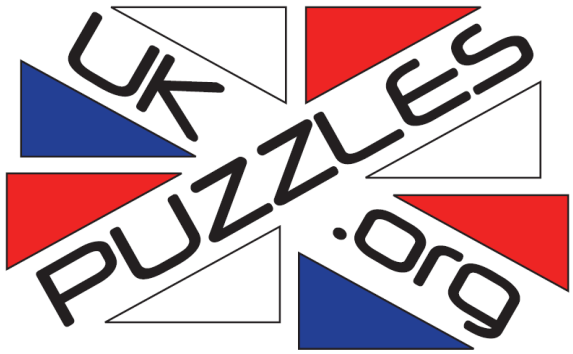


UK Puzzle Championship 2015

Instruction Booklet

Friday 26th – Monday 29th June, 2015

Competition Rules & General Information

Registration

To participate in the championship, you will need to register online at the UKPA forums – http://forum.ukpuzzles.org. During the registration process, you will be required to enter your real name, and your nationality. International participants are welcomed.

Preparation

In order to participate in the championship, you will need access to a printer (with sufficient toner/ink!) to print out the puzzle booklet. To solve the puzzles you will need a pen or a pencil, and possibly an eraser.

Competition Schedule

- The password protected puzzle booklet will be made available online at http://www.ukpuzzles.org/contest_setup.php?contestid=37 on Thursday 25th June. It is recommended that you download this password-protected pdf before you start the competition.

- The competition will start at **12:00 BST (11:00 GMT) on Friday 26th June** when the password for the pdf will be made available. Upon retrieving the password, you will have **2.5 hours** to solve the puzzles, and submit your answers via the entry page. You will be able to submit answers until **02:00 BST (01:00 GMT) on Tuesday 30th June**; as such it is highly recommended that you should start solving before 23:30 BST (22:30 GMT) on Monday.

- The results will be publicly announced at http://www.ukpuzzles.org a few days after the contest. The highest scoring UK participant will be declared the 2015 UK Puzzle Champion and the top two UK participants will be selected for the UK team for the WPC to be held in Bulgaria in October.

Entering & Submitting Answers

To submit your answers, you will need to go to the answer submission page found at http://www.ukpuzzles.org/contests.php?contestid=37 Here, for each puzzle, you will be required to enter the relevant answer keys into the form on the page. The answer keys for each puzzle are defined as part of the instructions.

Upon hitting the submit button, your answers will be sent to the server. You may submit answers as many times as you like, but only the last received keys will be subject to scoring.

Unless specifically stated otherwise, multiple answer key parts must be entered in the solution box separated by a comma, with no spaces. Malformed entry keys may be credited later in full or part at the judges' discretion.

If you have any urgent matters arising during the contest, please email liane@ukpuzzles.org UK participants only may call either 07901 648010 or 07707 992420 in an emergency.

In the event of the web hosting service failing during your participation, email me your answer keys before your 2.5 hours is completed. Answers submitted this way will only be accepted if a hosting failure, or equivalent, has occurred.

Code Of Conduct

All participants are expected to solve the puzzles honestly and fairly. You are not permitted to use any external solving aids of any form or receive assistance from any other individual.

If you have any questions related to this Instruction Booklet, you can and should freely discuss these matters in the competition discussion thread at http://forum.ukpuzzles.org/

It is strictly forbidden to discuss any details of the live championship puzzles, or make their contents known to others, directly or implicitly, via any medium while the contest is live.

The Championship organisers reserve the right to disqualify any participant judged to have acted with improper conduct.

POINTS & BONUSES

Points will be awarded according to the table on the following page. Participants who submit error free entries to all of the puzzles before the allotted two and a half hours are up will be awarded 3 points per minute, as recorded by the last submission time to the server. Late submissions will not be accepted (as in a WPC environment), so you are advised to submit answers as you solve them, rather than waiting until your time is running out. A bonus of 1 point per minute saved will be awarded if 26 or 27 puzzles are solved correctly.

N.B. – although the points allocated to a particular puzzle are a general indication of its difficulty and the time expected to solve it, it is possible that your individual experience may vary greatly. Please read the instructions fully and carefully!

Puzzle Examples

The remainder of this instruction booklet gives the instructions as they will appear in the competition booklet, with answer key descriptions, and examples of puzzle types used in the contest. The examples are credited to the appropriate authors, and all rights are reserved by the authors. Note that some of the puzzles in the competition may be by different authors. Instructions will be repeated in the competition booklet, but not the examples.

The competition booklet will have a cover page.

Please note that I have tried to standardise answer keys as much as possible and have used **B** for **Blank Cells** and **S** for **Shaded Cells** to avoid use of "Pentomino" letters.

The puzzle types and the points attached to them are detailed below.

	Points		Points
#1 – Masyu	10	#15 –Alljilin	25
#2 – Masyu	15	#16 –Yajilin Battleships	20
#3 – Blackout Maths	10	#17 –Easy as ABC Yajilin	25
#4 – Rock, Scissors, Paper	10	#18 –Chains	25
#5 – Balance	10	#19 – Minesweeper with Duds	25
#6 – Triple Block	10	#20 –Heavy Dots	30
#7 – Triple Block	15	#21 – Meandering Words	30
#8 – Tents	15	#22 – Pentasight	30
#9 – Tapa	15	#23 – Capsules Kakuro	35
#10 –Araf	15	#24 – Battleships	35
#11 – Nanro	15	#25 –Inside Skyscrapers	35
#12 – Norinori	15	#26 – Hungarian Pentomino	40
#13 – Word Mark	20	#27 – Linked Minesweeper/Nanro	40
#14 – Different Neighbours	20	#28 – Battleships Observers	50
		Total:	**650**

Puzzle Authors

We are indebted to the following authors for designing the puzzles used in this contest:

Bram de Laat
Erich Friedman
Nikola Zivanovic
Prasanna Seshadri
Salih Alan
Serkan Yürekli
Tawan Sunathvanichkul
Zuino Giochi

Many thanks also to Alan O'Donnell and Bram de Laat for test solving.

#1&2 –Masyu (10 & 15 pts)

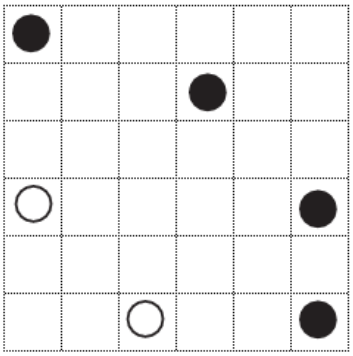
Zuino Giochii

Draw a single loop using only horizontal and vertical lines between the centres of some cells such that the loop does not visit any cell more than once. At every cell containing a white circle the loop must pass straight through that circle and make a 90 degree turn in at least one of the cells adjacent to the circle. At every cell containing a black circle the loop must make a 90 degree turn and travel straight through both cells adjacent to the circle.

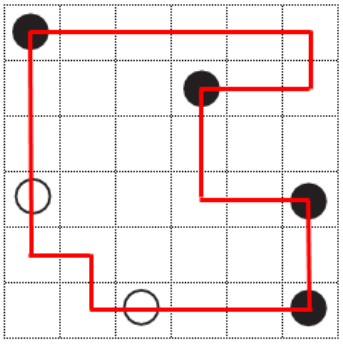
Answer key: Enter the length of the longest line in each row. If there is no horizontal line in a row, then enter 0 for that row. For any two digit number enter the unit digit only i.e. for "10" enter "0".

Example: 520214

Example: *Liane Robinson*



Solution:



#3 –Blackout Maths (10 pts)

Serkan Yurekli

Shade two of the cells in each sum so that the remaining equation is true. The standard order of operations is used i.e. multiplication and division are done before addition and subtraction.

Answer Key: Enter for each sum the digits/symbols that have been removed. **Do not** place any space or other mark between the different sums.

Example: 4xx4

Example:

1	9	+	8	4	=	2	x	7

1	x	2	x	3	=	2	3	4

Solution:

1	9	+	8		=	2		7

1	x	2		3	=	2	3	

#4 – Rock, Scissors, Paper (10 pts)

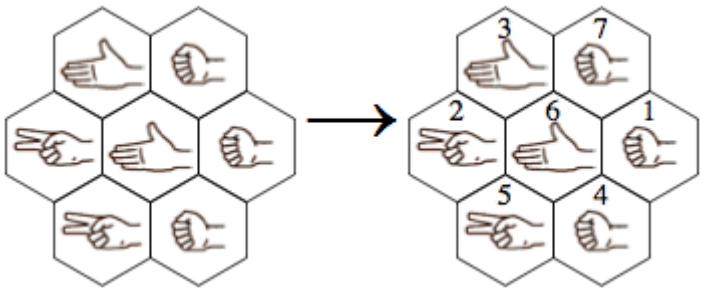
Erich Friedman

Each cell has contains a rock (fist), scissors (two fingers) or paper (palm). Starting at a rock, visit each cell once only by jumping to a cell in the same straight line as the current cell. The path must follow the pattern rock, scissors, paper, rock…The path may not double back on itself. Any cell may be jumped over multiple times.

Answer key: Enter the number of the order in which the cells are visited row by row from top to bottom. For two digit numbers enter the unit digit only e.g. for "10" enter "0".

Example: 3726154

Example: *Solution:*



#5 – Balance (10 pts)

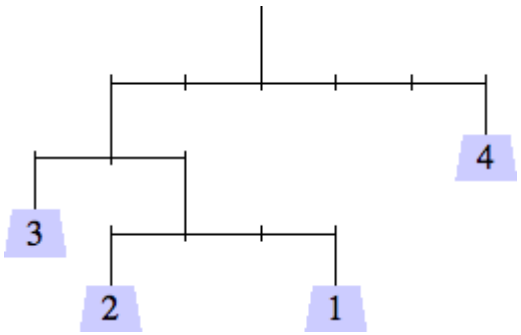
Erich Friedman

Place the numbers indicated on the weights so that the entire system balances, i.e. there should be equal torque on both sides of every horizontal bar. Ignore the weight of the bars and connectors.

Answer key: Enter the numbers in order they appear from left to right. For two digit numbers enter the unit digit only e.g. for "10" enter "0"

Example: 3214

Example/Solution:



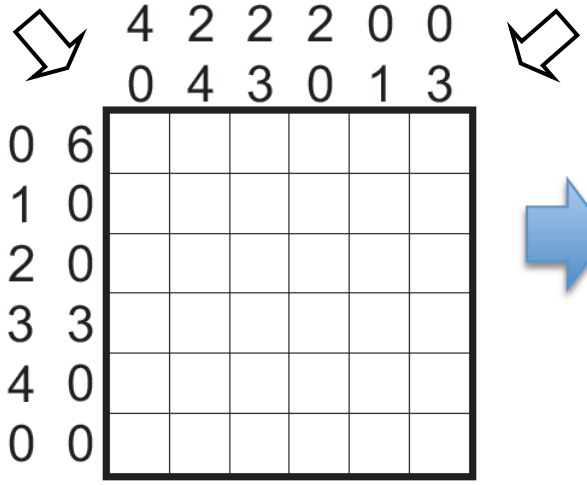
#6 & 7 – Triple Block (10 & 15 pts)

Nikola Zivanovic

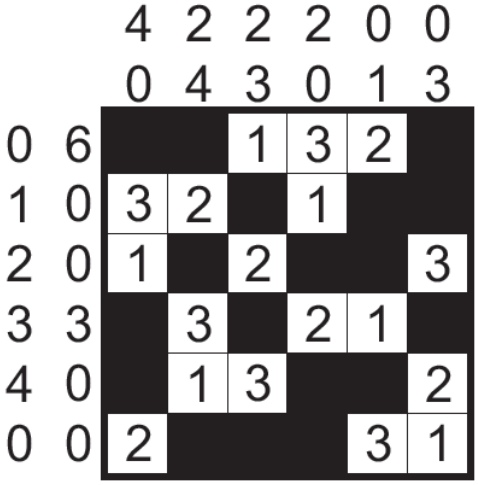
In each row and column, shade in exactly three cells and fill the remaining cells with each of the digits 1-n, where n is three less than the grid size. The numbers on the outside of the puzzle give the sum of the numbers between the shaded cells in that particular row or column, in the correct order.
Answer key: Enter the contents of the cells in the long diagonals (top left to bottom right, then top right to bottom left) using S for shaded cells.

Example: S222S1,SSSS12

Example:



Solution:



#8 – Tents (15 pts)

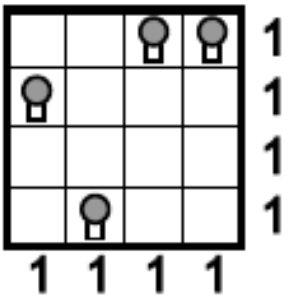
Salih Alan

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.

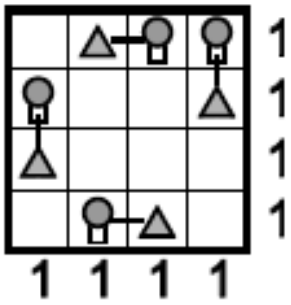
Answer key: In each row enter the column that the first tent appears in. If there are no tents in that row enter 0 for that row.

Example: 2413

Example: *Zoltan Horvath*



Solution:



#9 – TAPA (15 PTS)

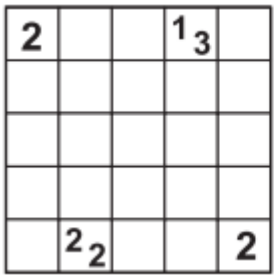
Zuino Giochii

Shade some cells to create a continuous wall. Numbers in a cell indicate the length of shaded cell blocks in its neighbouring cells. If there is more than one number in a cell there must be at least one unshaded cell between the shaded cell blocks. Shaded cells cannot form a 2x2 square or larger. There are no wall segments on cells containing numbers.

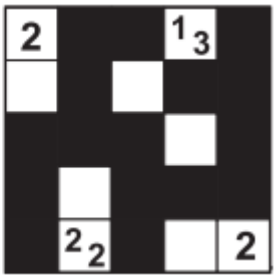
Answer key: Enter the length of the longest contiguous block of shaded cells in every row. If there are no shaded cells in any row enter 0 for that row.

Example: 22331

Example: *Serkan Yurekli*



Solution:



#10 – ARAF (15 PTS)

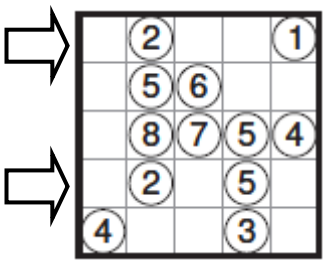
Prasanna Seshadri

Divide the grid into regions formed of adjacent cells. Each region should contain exactly two given numbers. The size of each region (in unit cells) should be between the two numbers in that region.

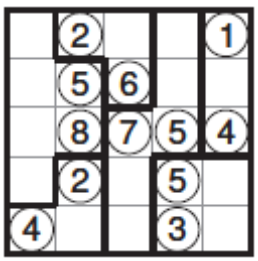
Answer key: Enter the size of the region for each cell in the marked rows/columns. For two digit numbers enter the unit digit only i.e. for "10" enter "0".

Example: 63363,63644

Example:



Solution:



#11 – NANRO (15 PTS)

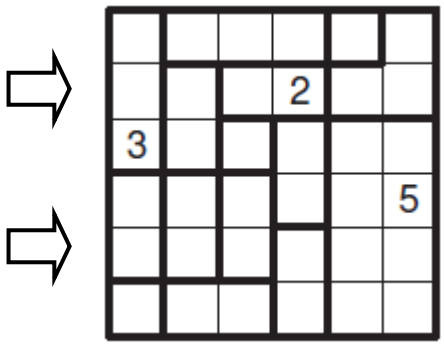
Serkan Yurekli

Enter numbers in some cells such that each bold outlined area contains at least one number. Each number within a bold lined area must equal the count of numbered cells in that area. When two numbers are orthogonally adjacent across an area boundary they must be different. No 2x2 area can be fully occupied by numbers. All numbers must form a single connected region.

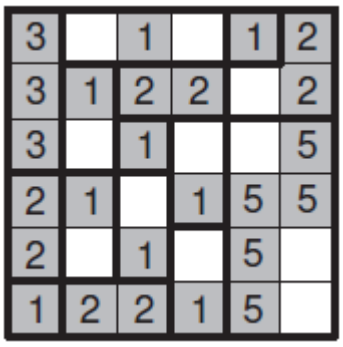
Answer key: Enter the contents of the marked rows/columns, using B for blank cells.

Example: 3122B2,2B1B5B

Example: *Prasanna Seshadri*



Solution:



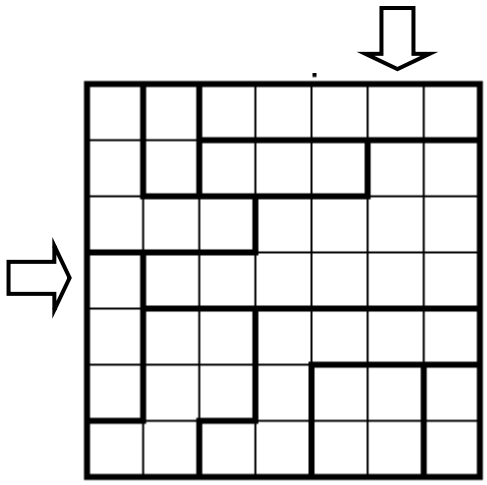
#12 – NORINORI (15 PTS)

Tawan Sunathvanichkul

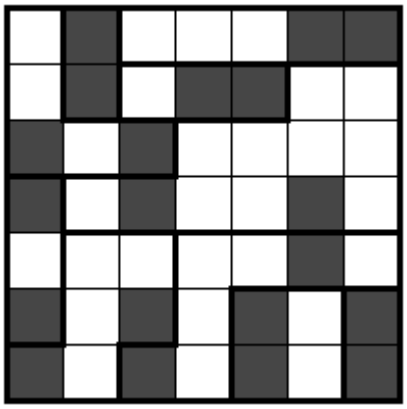
Locate several 1x2 dominoes in the grid by shading some cells. Dominoes may not be adjacent to each other (diagonal touch is allowed). Every region must have exactly two cells that are shaded. (Ignore any shading or regions in the puzzle – this is for aesthetic purposes only).
Answer key: Enter the contents of the marked rows/columns using B for blank and S for shaded cells.

Example: SBSBBSB,SBBSSBB

Example: *Grant Fikes*



Solution:



#13 – WORD MARK (20 PTS)

Tawan Sunathvanichkul c

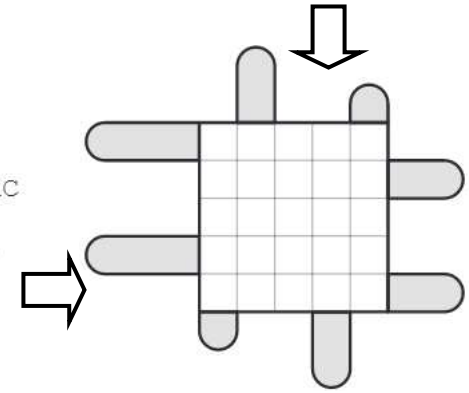
Enter each listed word into the grid, starting at the end of a grey tab and continuing into the grid. Words may intersect but no unlisted words may be formed anywhere in the grid.

Answer key: Enter the contents, inside the grid, of the marked rows/columns, Ignore blank cells..

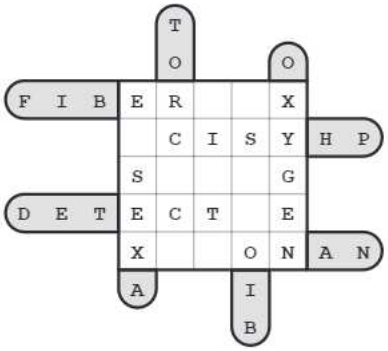
Example: XON,SO

Example: *Serkan Yurekli*

3: BIO
4: AXES, NANO, TORC
5: FIBER
6: DETECT, PHYSIC, OXYGEN



Solution:



#14 – DIFFERENT NEIGHBOURS (20 PTS)

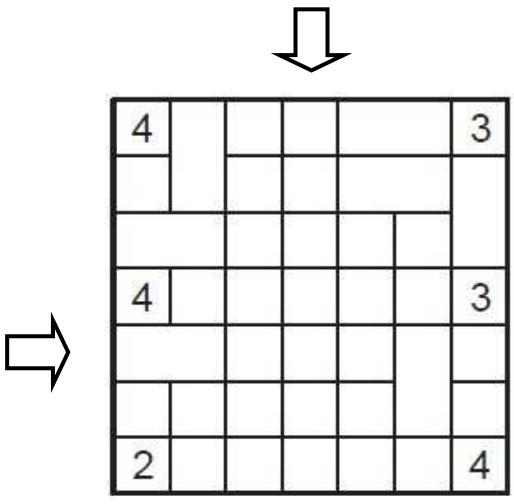
Tawan Sunathvanichkul

. Enter numbers from 1-4 in each cell so that no two cells with identical numbers touch each other, not even diagonally.

Answer key: Enter the contents of the marked row/columns

Example: 141414,4312131

Example: *Indian Puzzle Championship 2008*



Solution:

4	3	1	4	1	3
2		2	3	2	4
1		4	1	4	1
4	2	3	2	3	2	3
1		4	1	4	1	4
4	3	2	3	2		2
2	1	4	1	4	3	4

#15 – ALLJILIN (25 PTS)

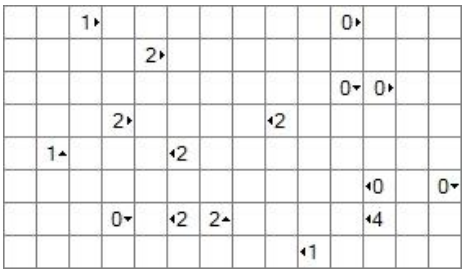
Zuino Giochii

Draw a single loop using only horizontal and vertical lines such that the loop does not visit any cell more than once. Any cells which the loop does not visit must be shaded. Shaded cells cannot touch orthogonally. Numbers with arrows indicate the exact number of shaded cells in a given direction in a specific row or column. **All** shaded cells must be pointed at by at least one arrow.

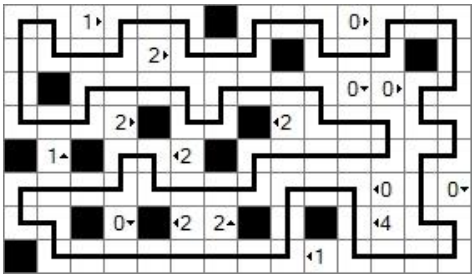
Answer key: Enter the length of the longest line in each row. If there is no horizontal line in a row, then enter 0 for that row. For any two digit number enter the unit digit only i.e. for "10" enter "0".

Example: 22324317

Example:



Solution:



#16 – YAJILIN BATTLESHIPS (20 PTS)

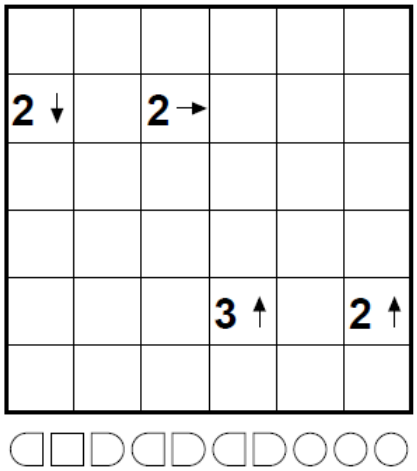
Nikola Zivanovic

Place each ship of the given fleet horizontally or vertically into the diagram such that no ship touches another, not even diagonally. Draw a loop which passes through all cells except those containing clues or containing ship segments. Clues denote the number of cells in the given direction which contain a ship segment.

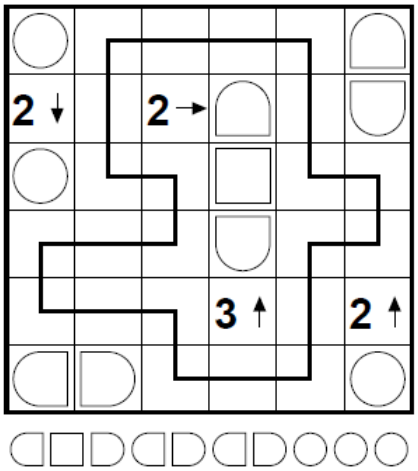
Answer key: Enter the length of the longest line in each row. If there is no horizontal line in a row, then enter 0 for that row. For any two digit number enter the unit digit only i.e. for "10" enter "0".

Example: 301222

Example: *Silke Berendes*



Solution:



#17 – Easy as ABC Yajilin (25 pts)

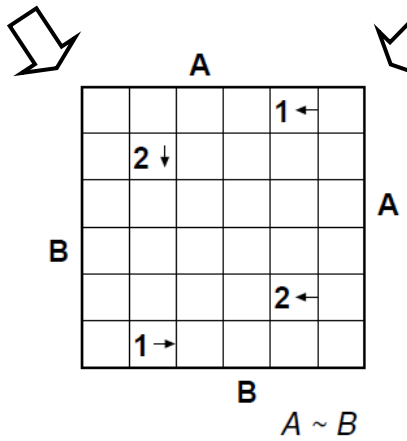
Nikola Zivanovic

Enter the letters from A to C (A to B in example) into the diagram so that every letter occurs once in every row and every column. The letters outside the grid indicate the first visible letter in that row or column when looking from that direction. Draw a loop which passes through all cells except those containing clues or containing letters. Clues denote the number of cells in the given direction which contain a letter.
Note: Letters may(!) touch other letters.

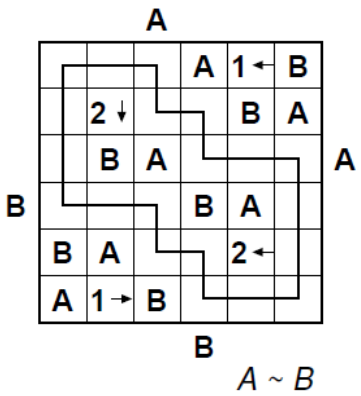
Answer key: Enter the contents of the cells in the long diagonals (top left to bottom right, then top right to bottom left) using L for shaded containing part of the loop and ignoring clued cells.

Example: LABL,BBLLAA

Example: *Silke Berendes*



Solution:



#18 – Chains (25 pts)

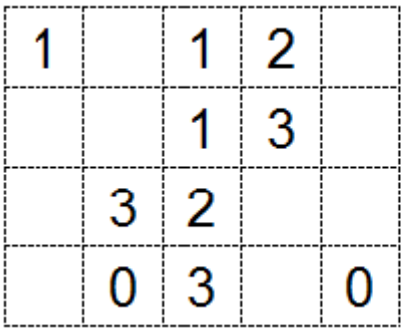
Nikola Zivanovic

Draw some chains into the grid (There are two chains in the example. The number of chains in competition puzzle will be unknown). A chain is a path made of 11 horizontal or vertical lines. Chains cannot cross and touch each other, not even at a point. The numbers indicate how many sides of the corresponding cell belong to some chain/s. In other words, this puzzle is similar to a Slitherlink puzzle cut into some segments that are 11 lines long.

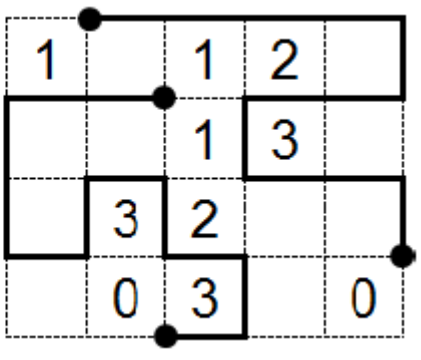
Answer key: Enter the length of the longest horizontal chain section in each row. If there are no horizontal sections in a row then enter 0.

Example: 42211

Example: *Matus Demiger*



Solution:



#19 – Minesweeper with Duds (25 pts)

Nikola Zivanovic

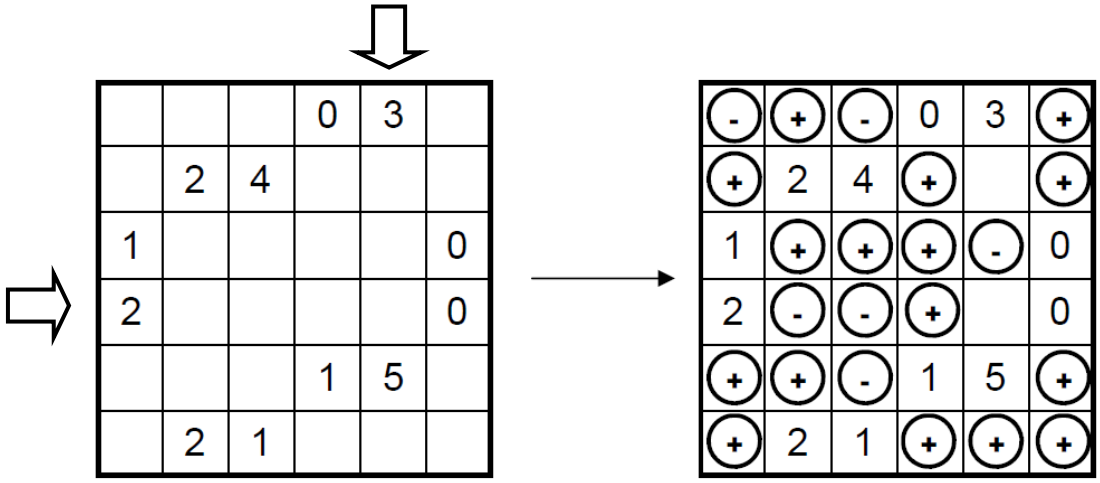
Locate a number of mines in the grid. Numbers in the grid represent the amount of mines surrounding that square. Mines cannot occupy cells with numbers in them. Several of the mines are duds. These duds will count as minus one towards any surrounding clue numbers.

Normal mines: ⊕ Duds: ⊖

Answer key: Enter the contents of the marked row/columns using + for live mines, - for duds and B for either cells that are blank or contain a clue.

Example: B--+BB,BB-BB+

Example: *Tawan Sunathvanichkul* *Solution:*



#20 – Heavy Dots (30 pts)

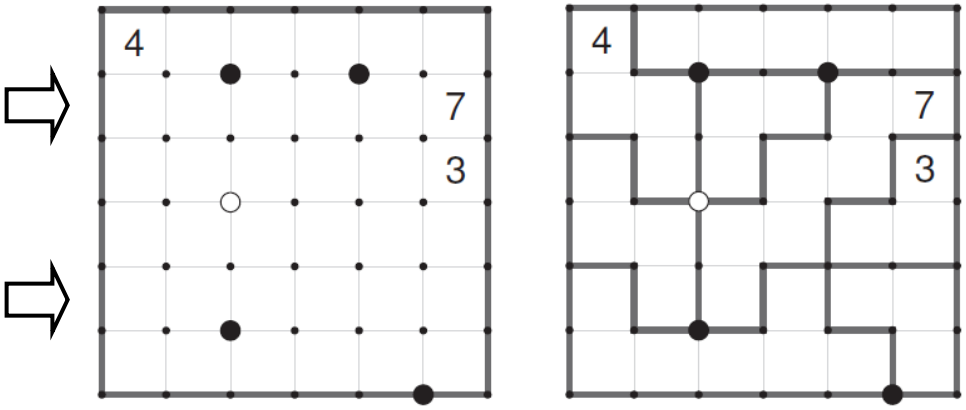
Nikola Zivanovic

Draw vertical/horizontal lines along the gridlines to divide the grid into regions. A region may contain at most one number, equal to the area of the region. No region may cover a 2×2 area. Some dots are "heavy" and have 3 or 4 lines connected to them. Black circles indicate heavy dots with exactly three lines; white circles indicate heavy dots with four lines. Not all heavy dots are given, but there can be no heavy dots orthogonally adjacent to the indicated ones. In other words, there may be only 2 lines from any unmarked dot adjacent to a white/black circle.

Answer key: Enter the size of the area that each cell belongs to in the marked rows/columns. . For any two digit number enter the unit digit only i.e. for "10" enter "0".

Example: 443377,747733

Example: *Rajesh Kumar* *Solution:*



#21 – Meandering Words (30 pts)

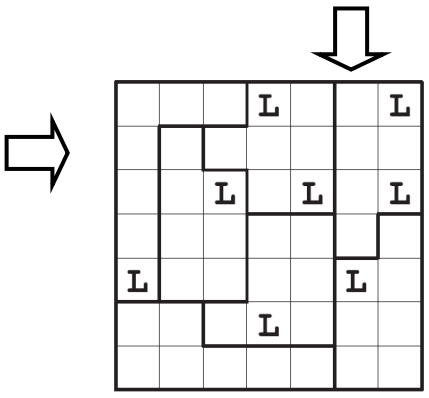
Tawan Sunathvanichkul

Enter the listed words into the grid, one word per region. Each word must be read along across horizontally and vertically adjacent cells. Identical letters may not touch each other, not even diagonally.

Answer Key: Enter the contents of the marked rows/columns.

Example: EHECPOI,EOAGLEI

Example: *Takeya Saikachi* *Solution:*



FLEMING
FOURIER
GALILEO
HILBERT
LAPLACE
LEIBNIZ
LORENTZ

N	T	Z	L	A	E	L
E	H	E	C	P	O	I
R	I	L	A	L	A	L
O	E	B	M	I	G	Z
L	R	T	E	N	L	I
O	U	F	L	G	E	N
F	R	I	E	R	I	B

#22 – PENTASIGHT (30 PTS)

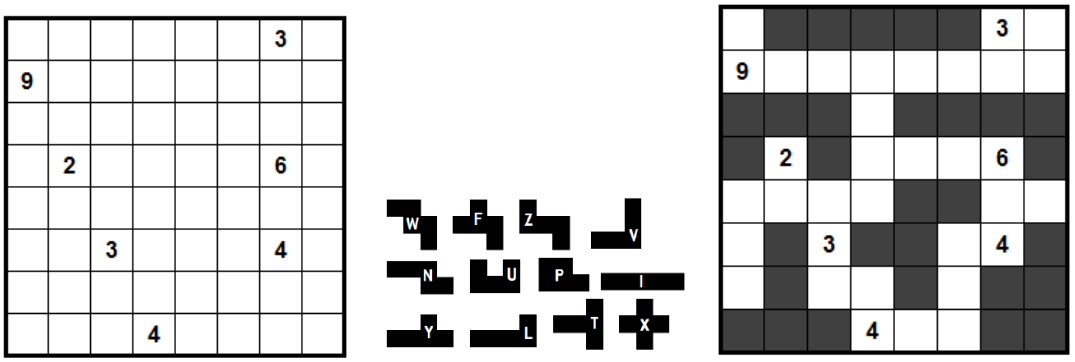
Prasanna Seshadri

Shade some cells in the grid to form some pentomino pieces, each of them at most once. Rotations and reflections are considered the same piece. Pentomino pieces cannot touch each other, not even diagonally. Numbers in the grid indicate the total number of white cells that can be seen from the number's cell horizontally and vertically, including its own cell. Pentomino pieces block the visibility of cells beyond them. **In addition, all white cells must form a single interconnected area.**

Answer key: Enter the first and last pentomino in each row. If there is only one pentomino in a row enter B for the 2nd and if there are none in a row enter BB for that row.

Example: IBBBULULFBTPTPTP

Example: *Solution:*



#23 – CAPSULES KAKURO (35 PTS)

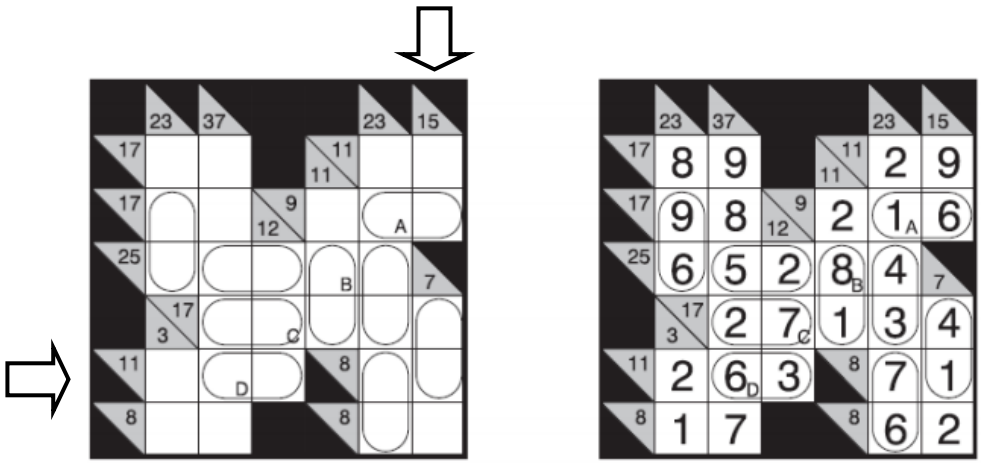
Tawan Sunathvanichkul

Enter a number from 1-9 into each white cell. Each horizontal run of white cells adds up to the total above the diagonal line to the left of the run, and each vertical run of white cells adds up to the total below the diagonal line above the run. No digit can be used more than once in any run.
Additionally, all capsules must contain one odd number and one even number.

Answer key: Enter the contents of the marked rows/columns. Ignore blank or clue cells.

Example: 26371,96412

Example: *Japan Puzzle Championship 2014* *Solution:*



#24 – BATTLESHIPS (35 PTS)

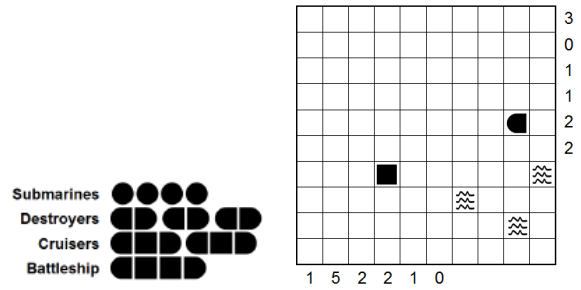
Tawan Sunathvanichkul

Locate the given fleet in the grid. Ships may not touch each other, even diagonally. Numbers to the right or under the grid define how many cells are occupied by ship(s) in that row/column. Some parts of ships are already given. Ships cannot occupy cells with waves.

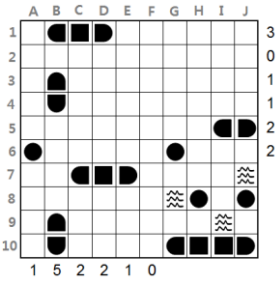
Answer key: Enter the co-ordinates of the four submarines from top-bottom and left-right.

Example: A6,G6,H8,J8

Example:



Solution:



#25 – INSIDE SKYSCRAPERS (35 PTS)

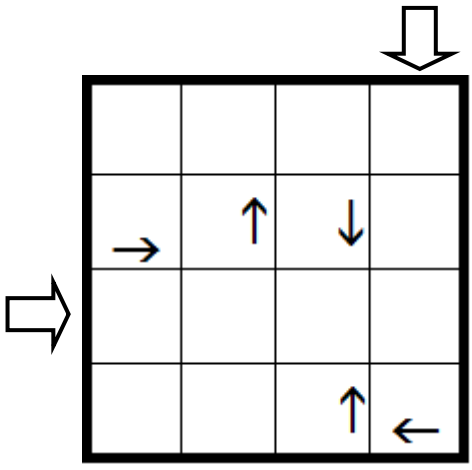
Bram de Laat

Place the digits 1 - 6 once in every row and column. The digits represent skyscrapers of that height. Digits in cells with arrows indicate that this many skyscrapers are visible when looking in that direction from that cell. Larger digits block smaller digits from sight.

Answer key: Enter the contents of the marked rows/columns.

Example: 4213,1432

Example:



Solution:

2	3	4	1
3→	1↑	2↓	4
4	2	1	3
1	4	3↑	2←

#26 – HUNGARIAN PENTOMINO (40 PTS)

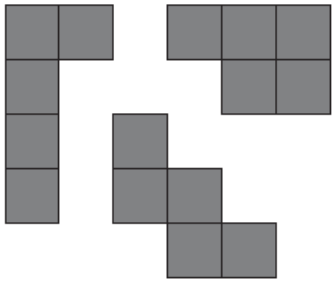
Tawan Sunathvanichkul

Locate a set of pentominoes in the grid so that no two pentominoes touch each other, not even diagonally. Every third cell occupied by a pentomino (reading from top to bottom and left to right) is marked with a circle.

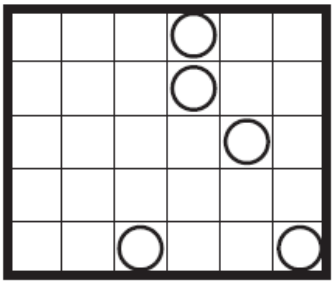
Answer key: Enter the first and last pentomino in each row. If there is only one pentomino in a row enter B for the 2nd and if there are none in a row enter BB for that row.

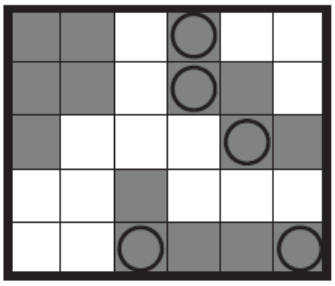
Example: PWPWPWLBLB

Example:



Solution:





#27 – LINKED MINESWEEPER/NANRO (40 PTS)

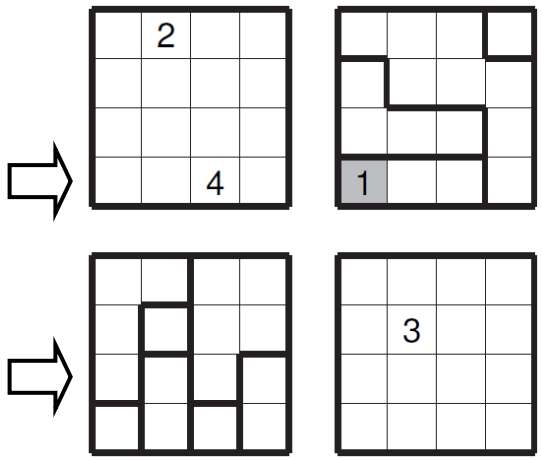
Nikola Zivanovic

General rules: There are four grids. The top left and bottom right are Minesweeper grids. The top right and bottom left are Nanro grids. In the Nanro, the cells occupied by numbers are considered 'shaded'. In the Minesweeper, the mines are considered 'shaded'. For every pair of adjacent rows/columns across two grids (e.g. Row 4 of top left grid and Row 4 of top right grid), the number of shaded cells must be the same (as determined by the solver).
Nanro: Enter numbers in some cells such that each bold outlined area contains at least one number. Each number within a bold lined area must equal the count of numbered cells in that area. When two numbers are orthogonally adjacent across an area boundary they must be different. No 2x2 area can be fully occupied by numbers. All numbers must form a single connected region.
Minesweeper: Place mines in some empty cells so that each number represents the total count of mines in all neighbouring cells, including diagonally adjacent cells. Each cell can contain at most one mine.

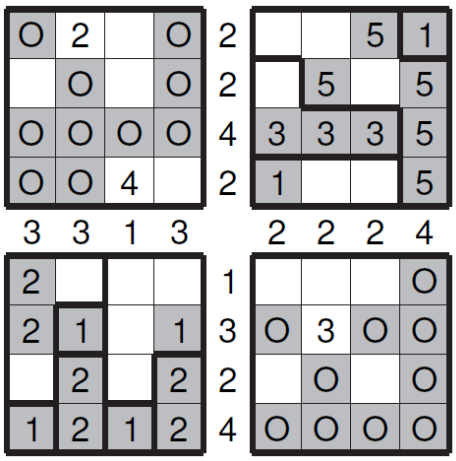
Answer key: Enter the contents of the grids in the marked rows/columns, using B for blank cells (and clued cells in the minesweeper grids) and O (the letter) for mines.

Example: OOBB1BB5,B2B2BOBO

Example: *Prasanna Seshadri*



Solution:



#28 – Battleships Observers (50 pts)

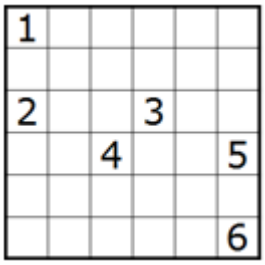
Bram de Laat

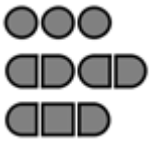
Place the given fleet of ships in the grid so that they don't touch each other, not even diagonally. Numbers in the grid indicate the number of empty cells that can be seen from that cell horizontally and vertically, not including the cell itself. Their view is blocked by ships.

Answer key: Enter the co-ordinates of the submarines (single cell ships) from left to right, top to bottom.

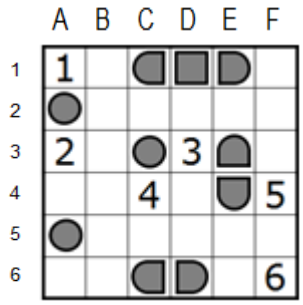
Example: A2,C3,A5

Example:





Solution:



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