

World Puzzle Championship 2014 Instruction Booklet

THURSDAY 14th AUGUST

1 – Welcome	50m	09:10-10:00	750 points
2 – The Great Outdoors	30m	10:15-10:45	450 points
3 – Classics	120m	11:05-13:05	1800 points

LUNCH

4 – Latin Squares	60m	14:30-15:30	900 points
5 – On Your Own	45m	15:45-16:30	600 points
6 – Sprint	30m	16:45-17:15	600 points
7 – Table for Four (TEAM)	60m	17:45-18:45	3600 points

FRIDAY 15th AUGUST

8 – English Country Garden	60m	09:00-10:00	900 points
9 – Loop the Loop	60m	10:15-11:15	900 points
10 – The 200 Club	90m	11:30-13:00	2000 points

LUNCH

11 – Not Quite Classics	60m	14:15-15:15	1200 points
12 – Something Different	60m	15:30-16:30	1200 points
13 – Afternoon Tea	45m	16:45-17:30	670 points
14 – Doppelgangers (TEAM)	60m	17:45-18:45	3600 points

SATURDAY 16th AUGUST

15 – Square Bashing	30m	09:30-10:00	1800 points
(TEAM)	30m	10:30-11:15	2800 points
16 – Individual Play-off		14:00	

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World Puzzle Championship 2014 Instruction Booklet

These are the instructions for the 2014 World Puzzles Championship, hosted and organised by the UK Puzzle Association. Any questions related to these instructions should be raised and discussed in the WPC Instruction Book Questions forum: <http://ukpuzzles.org/forum/viewforum.php?f=23>.

Scoring and Bonus

Points will be awarded only for 100% correctly solved puzzles. There will be no partial credit.

Individual Rounds

A bonus of 15 points for each full minute remaining will apply to any competitor who correctly solves every puzzle in a round. At the judge's discretion, $0.75\times$ bonus will be awarded in the case of a single minor mistake on no more than 1 puzzle, except in round 3 where a $0.75\times$ bonus will be awarded in the case of a single minor mistake on no more than 2 puzzles, as judged by the tournament director. For the avoidance of doubt, an example of a minor mistake is a single pencilmark that has not been clearly written in as a solution digit, no more than two digits or cells that have been swapped, or a single incorrect or missing line in an otherwise-complete and correct puzzle.

Team Rounds

A bonus of 60 points for each full minute remaining will apply to any team who correctly solves every puzzle in a round. If there are any mistakes, no bonus will be awarded.

Competition Hall Rules

- 1.1. Each competitor must sit at their pre-allocated desk to take part in individual rounds. Teams must work at their pre-allocated desks/areas for team rounds.
- 1.2. Competitors should ensure that they are at their desk ready for the start of each round. Late arrivals may not be permitted to enter the competition hall to take part in a round (at the discretion of the organisers).
- 1.3. Prior to the start of each round competitors should clearly write their name, team and reference number on the front of their competition booklet. If this information is not completed the organisers reserve the right not to award any points to that competitor for that round. Competitors must not open their booklet.
- 1.4. Once the signal to start a round is given competitors may open their booklet and begin solving the puzzles.
- 1.5. During each individual round competitors must remain silent, unless declaring completion of a round.
- 1.6. During team rounds team members may talk amongst themselves, but should do this with respect to other teams that may be near them.
- 1.7. If declaring a round complete, close your booklet, clearly state 'finished' and raise your arm. Keep your arm raised until your paper has been collected. Teams should declare in the same way if they complete a team round.
- 1.8. Competitors or teams that complete a round with more than five minutes left will be allowed to quietly leave the competition hall.
- 1.9. Competitors or teams that complete a round with five minutes or less left will not be allowed to leave their desk or table so as not to cause unnecessary disruption to fellow competitors.
- 1.10. If any competitor needs to leave the competition hall prior to the end of a round, they will not be allowed to take any further part in that round.
- 1.11. Once the signal to finish a round is given, competitors must immediately stop solving, close their booklet and put their pen/pencil down and be ready to hand their booklet in for marking.
- 1.12. At the end of a round you must remain seated until all puzzle booklets have been collected. You will be told when you can get up and leave.
- 1.13. Mobile phones are not permitted to be used in the competition hall and must be turned off.
- 1.14. Only team captains and official observers will be allowed access to the competition hall whilst either individual or team rounds are taking place. Other non-competing people must stay outside the competition hall at all times as there is no space for spectators.
- 1.15. Competitors may not use cameras or other recording devices during rounds. Only official observers may do so, at the discretion of the organisers. They must respect the competitors and not use flash photography or cameras with excessive sounds.

- 1.16. If you believe that there is a problem with any puzzle, leave that puzzle and continue with another. This will be investigated upon completion of the round.
- 1.17. Puzzles can be completed in any order. The points value of a puzzle is an indication of its anticipated difficulty, although your solving experience may differ.
- 1.18. The boxed area at the bottom of each puzzle booklet page is reserved for markers' notes - do not write in this area.

Permitted Items

- 2.1. Unless specifically stated for any round permitted items which may be taken into the competition hall and used are: Pens, pencils, erasers, rulers, instruction booklets (optionally annotated with notes regarding puzzle instructions and preparation notes) and blank paper. Drinks and snacks will also be allowed so long as they don't disturb other competitors (e.g. rustling a crisp packet, or a very strong smell).
- 2.2. It is strictly forbidden to use electronic devices such as music players and headphones of any type or any type of calculator. Use of such equipment may lead to the competitor being disqualified from the competition.
- 2.3. Any other items brought into the hall must be left in a bag on the floor under your desk, so as not to block the aisles.

Marking and Queries

- 3.1. Once a round has been fully marked booklets will be returned to team captains at a specified location.
- 3.2. In the event of any query once a booklet has been marked and returned to a competitor then the query must be raised through the captain with the organisers. The booklet should be left with the organisers for investigation.
- 3.3. Some puzzles may be photographed during the marking phase to confirm that no subsequent alteration has been made to the puzzle.
- 3.4. Team captains are responsible for ensuring that any information given to them relating to the competition is effectively relayed to their team.
- 3.5. The decision of the tournament director is final.

Breach of Rules

- 4.1. Any breach of these rules may lead to a competitor or team being disqualified from the competition.

Play-offs

Overview

The top 10 competitors from the individual competition will qualify for the play-offs. This is broken into three rounds. The format of each round is a set of puzzles that were previously encountered in the tournament, to be solved in a fixed order. Details of the puzzles in the play-off will be announced at a later date.

Play-offs competitors will solve as per previous rounds on desks. Each puzzle will be taped centrally to the desk and will be filmed by a camera for relay to spectators.

The first round will feature competitors who finished in positions 7-10, with staggered starts determined by points differences, as defined below.

The winner of the first round, 'A', will progress into the second round along with competitors who finished in positions 4-6. 'A' will have a staggered start as determined by the 7th place competitor.

Similarly, the winner of the second round, 'B', will progress into the third and final round, and play against competitors who finished in positions 1-3. 'B' will have a staggered start as determined by the position of the 4th place competitor. This round will determine the podium places for the 2014 World Puzzle Championship.

Staggered starts.

Given $S_1, S_2, \dots, S_{10}$ are the point scores of the top 10 competitors, and

$$B = \frac{600}{S_1 - S_{10}}.$$

The staggered start, in seconds, for competitor i in the first round is: $B(S_7 - S_i)$.

The staggered start, in seconds, for competitor i in the second round is: $B(S_4 - S_i)$.

The staggered start, in seconds, for competitor i in the third round is: $B(S_1 - S_i)$.

Solving and Submission

When a play-off competitor completes a puzzle, they must raise their hand to indicate to a judge to enter the submission period.

The entire puzzle will then be judged over the next minute. After one minute, if the puzzle is correct, the judge will allow the competitor to begin the next puzzle. If the puzzle is incorrect, the judge will return the incorrect puzzle to the competitor. The competitor can resubmit a returned puzzle at any time, and will again enter the submission period.

Puzzle Instructions and Examples

The example puzzles may not reflect either the size or difficulty of the competition puzzles. Their purpose is primarily to provide clarification of the puzzle rules. Nonetheless, we have endeavoured to provide non-trivial examples wherever possible, and for types you are unfamiliar with we encourage you to solve the examples prior to the tournament.

The tournament puzzle books will include the exact same instruction text as appears in this book, but they will not include either the example puzzle or the example solution. All puzzles in the tournament puzzle books are to be solved. Each puzzle will clearly show how many points it is worth both on the front of the booklet and immediately next to the number and title of the puzzle.

It is intended that the number of points awarded to a puzzle provides a true indication of its relative difficulty, but your experience may of course differ from that of the test solvers.

Author Credits

Puzzle authors will remain individually anonymous until the solutions are distributed. The organisers would like to thank Silke Berendes, Andrey Bogdanov, Tom Collyer, Hns Eendebak, Erich Friedman, Andrea Gilbert, David McNeill, David Millar, Gareth Moore, Puzzler Media, Richard Stolk, Trevor Truran, Serkan Yurekli and the World Puzzle Federation for the example and competition puzzles.

Round 1: Welcome Round

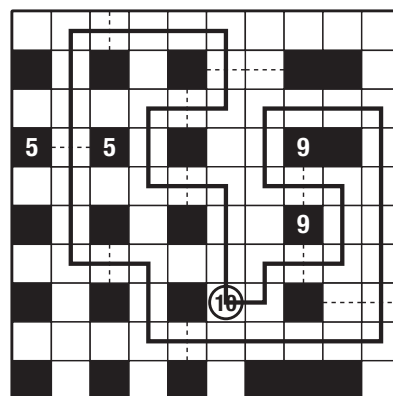
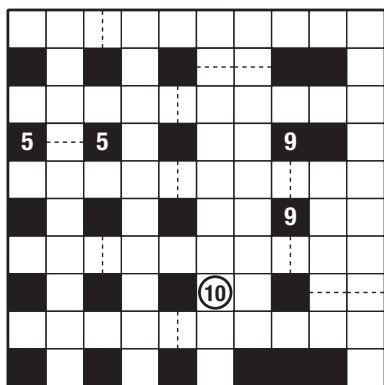
Thursday 14th August 2014, 09:10 - 10:00

50 minutes - 750 points

1. Suraromu

20 points

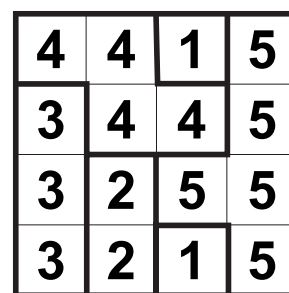
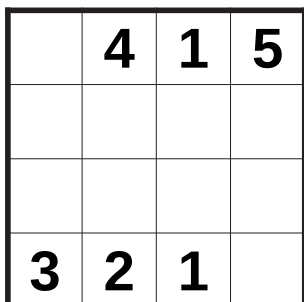
Rules: Draw a single loop that passes through every gate in numerical order. The puzzle contains 'x' dashed-line gates, each of which can be travelled through only once. Some gates are numbered, 'n', and must be passed through as the 'n'th gate in the loop. The loop cannot enter any cell more than once, and can only travel horizontally or vertically. Between the 'x'th and 1st gates the puzzle must travel through the cell containing the circled number, which is equal to the number of gates, 'x'. Numbered gates have numbers on both sides of the gate, except if the gate touches the edge of the puzzle in which case it has a single number. The line must pass straight through a gate, so cannot turn on a gate cell.



2. Fillomino

80 points

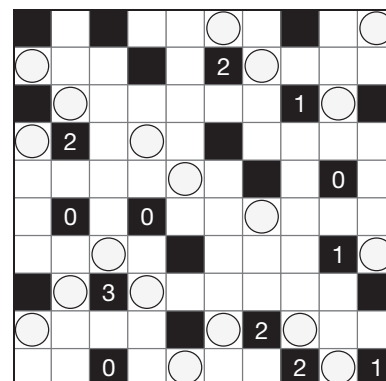
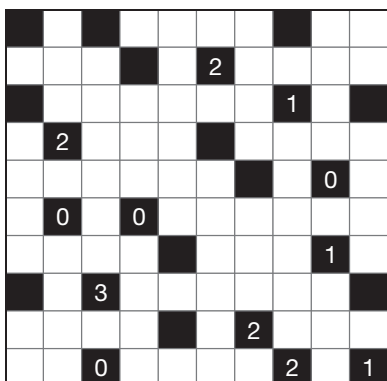
Rules: Fill each empty cell with a number such that every number in the grid is part of a continuous region of that many cells. A region is continuous whenever two cells touch orthogonally. Two different regions made up of the same number of cells cannot touch orthogonally. To receive credit you need only unambiguously indicate the shape of each region - it is not necessary to write all numbers in.



3 - 4. Akari

20, 20 points

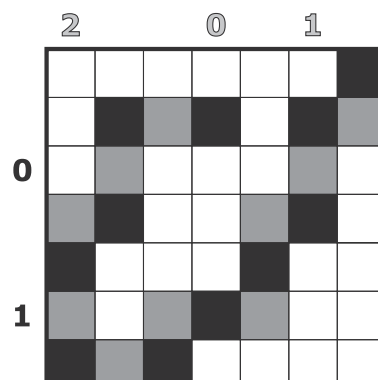
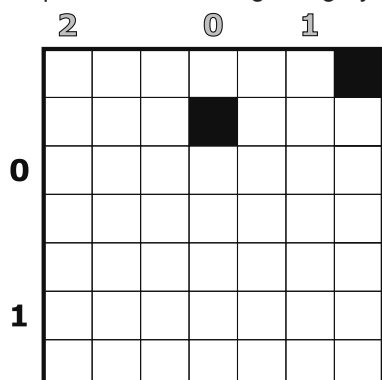
Rules: Place light bulbs in selected white cells so that each white cell is illuminated. Light bulbs illuminate every white cell in all four orthogonal directions until blocked by a black cell. No light bulb can be illuminated by another light bulb. Clue numbers correspond to the number of light bulbs in the four orthogonally adjacent cells.



5. Striped Snake

40 points

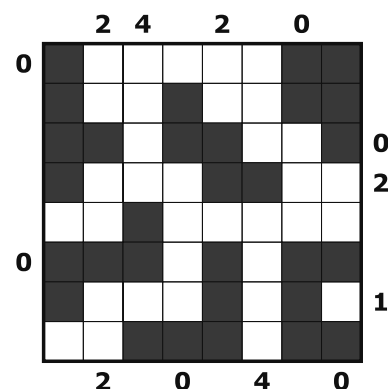
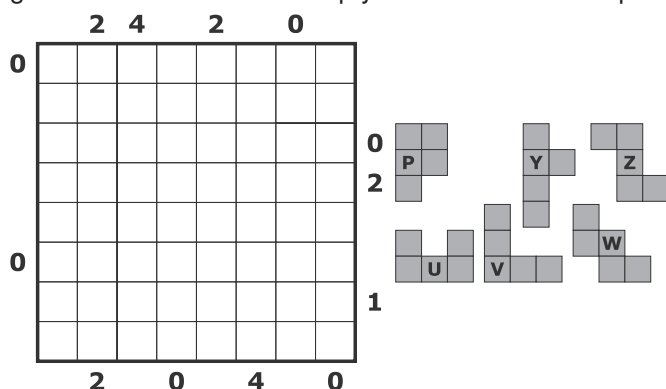
Rules: Draw a snake which cannot touch itself, not even diagonally. All odd cells of the snake are black and all even cells are grey. Clues at the left show the number of black cells in the corresponding row. Clues on the top show the number of grey cells in the corresponding column. The head and tail of the snake are shown as black cells. You need only show the path of the snake to receive credit - there is no requirement to distinguish grey and black cells.



6. Pentominos

60 points

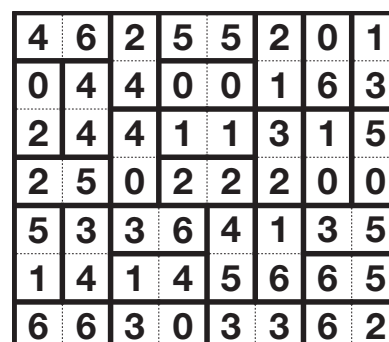
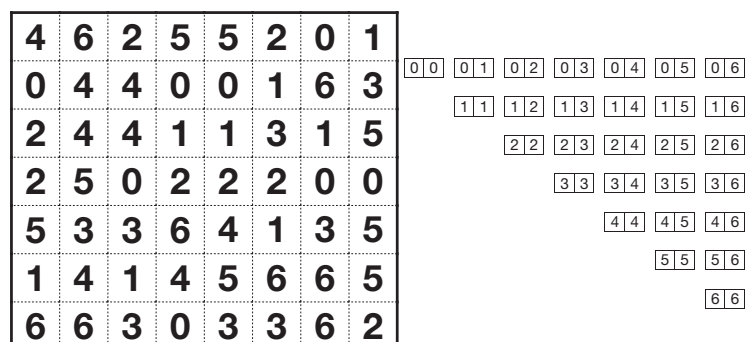
Rules: Put the complete set of pentominos (a smaller set in the example) into the grid. Pentominos can be rotated and reflected. Pentominos cannot touch each other, even at a corner. Clues outside the grid show the number of empty cells before the first pentomino is reached.



7. Dominoes

30 points

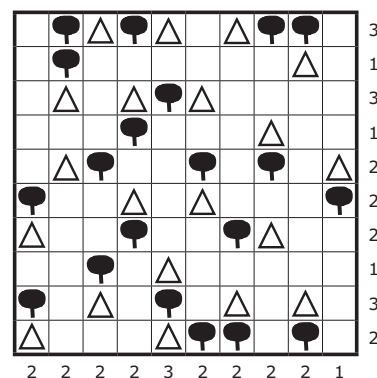
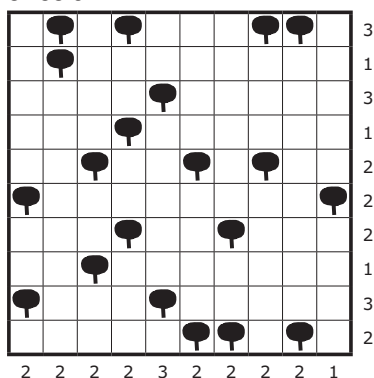
Rules: A standard set of 28 dominoes has been placed in the grid. Mark the position of each domino.



8. Tents

30 points

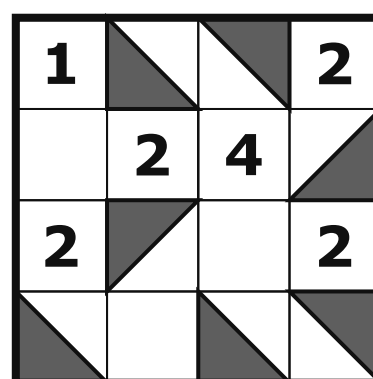
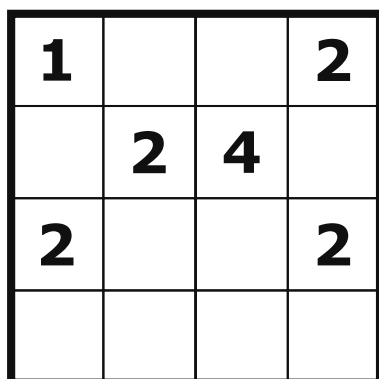
Rules: Attach a tent to each tree, in a horizontally or vertically adjacent cell. Cells with tents do not touch each other, not even diagonally. Numbers outside the grid indicate the number of tents in that row or column.



9 - 10. Triangular Minesweeper

40, 60 points

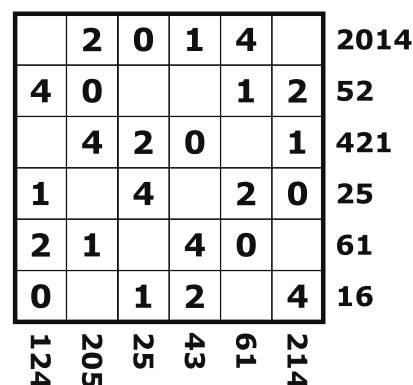
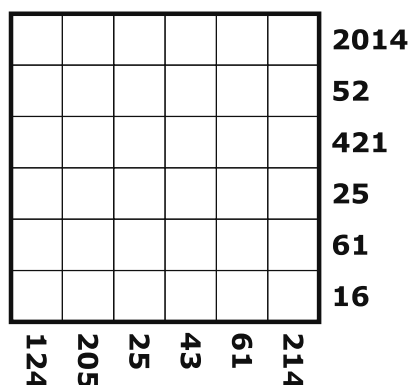
Rules: Place 14 right-angled triangles (7 triangles in the example) into some empty cells in the grid. Each triangle occupies exactly half of a cell. Triangles cannot touch each other, not even at a point. Clues in cells show the number of triangles touching that cell, including only at a point.



11 - 12. Magic Summer

40, 40 points

Rules: Place the digits 2, 0, 1 and 4 once each into every row and column. Each continuous block of two or more digits in a row or column is considered a multiple-digit number. Multiple-digit numbers cannot start with 0. Clues outside the grid give the total of all numbers in that row or column.





Round 2: The Great Outdoors

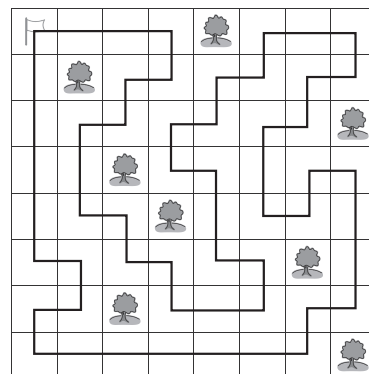
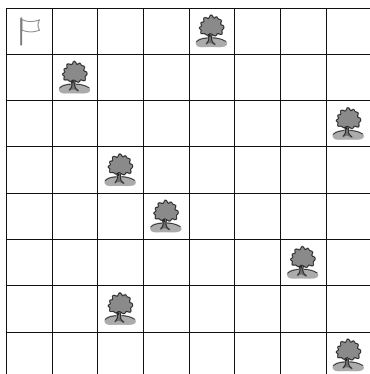
Thursday 14th August 2014, 10:15 - 10:45

30 minutes - 450 points

1. Woodland Trail

20 points

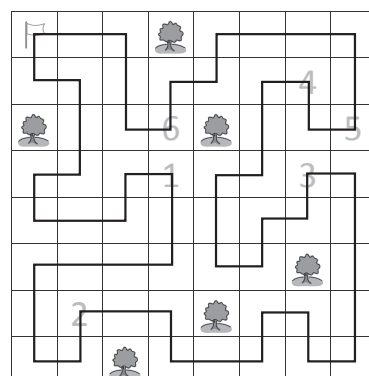
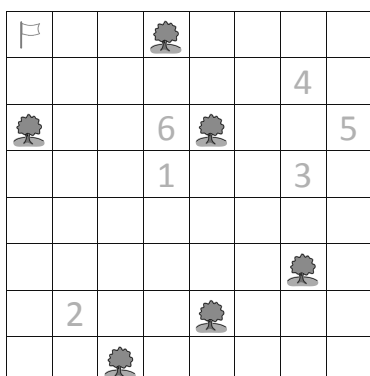
Rules: Draw a trail which starts and ends at the flag in the top left corner of the grid and visits every cell except for those occupied by a tree. The trail moves orthogonally between the centre of cells and does not touch or cross itself.



2. Numbered Trail

50 points

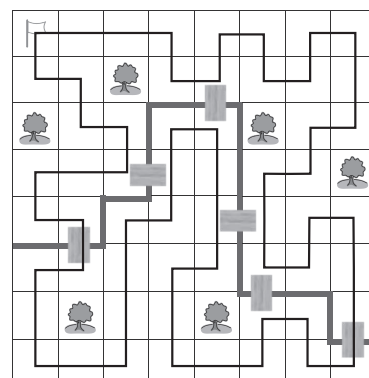
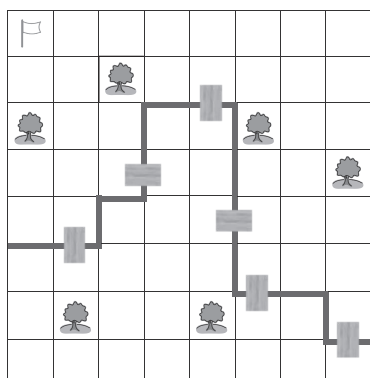
Rules: Draw a trail which starts at the flag in the top left corner of the grid, visits every numbered view-point in numerical order, then returns to the flag. Every cell must be visited except for those occupied by a tree. The trail moves orthogonally between the centre of cells and does not touch or cross itself.



3. Riverside Trail

20 points

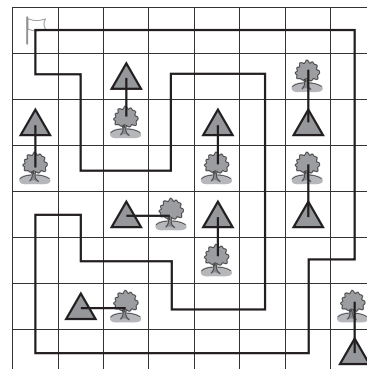
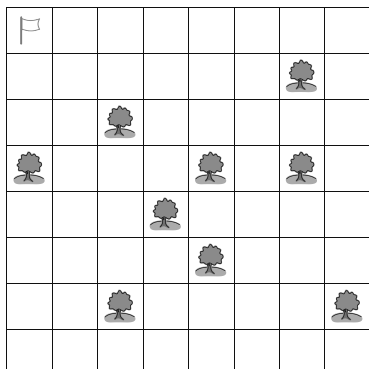
Rules: Draw a trail which starts and ends at the flag in the top left corner of the grid and visits every cell except for those occupied by a tree. The trail moves orthogonally between the centre of cells and does not touch or cross itself. The river, denoted by a bold line, can only be crossed at the given bridges. There is no requirement to cross every bridge.



4. Campsite Trail

60 points

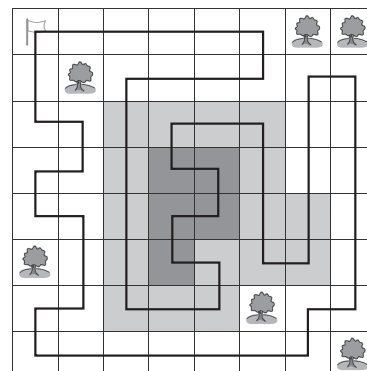
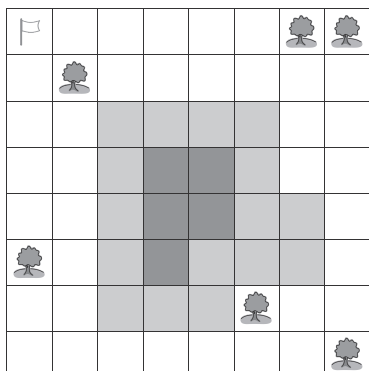
Rules: Place a tent in one of the cells orthogonally adjacent to each tree. Cells occupied by tents cannot touch each other even at a corner. Then draw a trail which starts and ends at the flag in the top left corner of the grid and visits every cell except for those occupied by trees or tents. The trail moves orthogonally between the centre of cells and does not touch or cross itself.



5. Mountain Trail

80 points

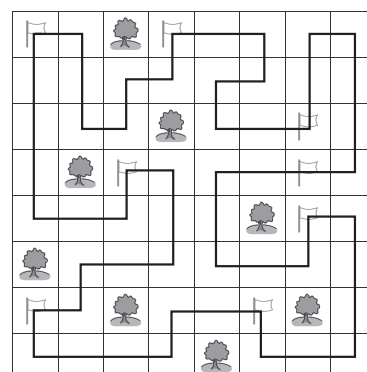
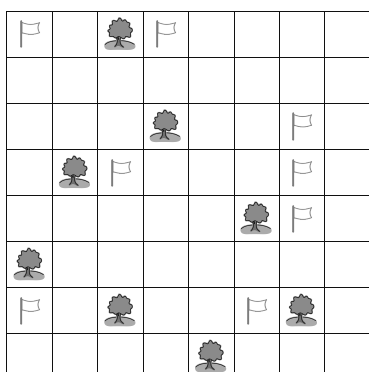
Rules: Draw a trail which starts and ends at the flag in the top left corner of the grid and visits every cell except for those occupied by a tree. The trail moves orthogonally between the centre of cells and does not touch or cross itself. The grid is divided into 3 regions by shading. Lighter shading represents the lower slopes of a mountain and darker shading represents the summit region of the mountain. The trail starts and finishes in the unshaded lowland region and makes a single ascent of the mountain and a single descent i.e. the trail has only 5 sections: lowland, lower slopes, summit region, lower slopes, lowland.



6. Running Trail

100 points

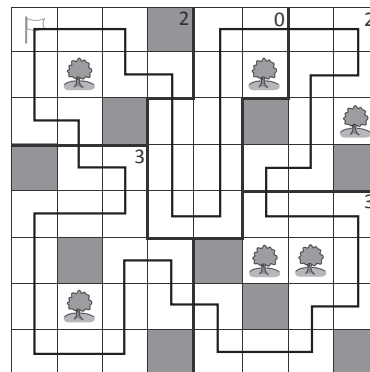
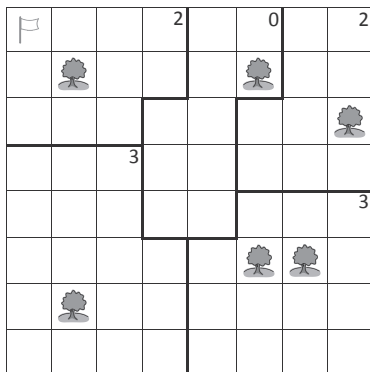
Rules: Draw a trail which starts and ends at the flag in the top left corner of the grid and visits every cell except for those occupied by a tree. The trail moves orthogonally between the centre of cells and does not touch or cross itself. The trail is divided into sections of equal length. Each intermediate checkpoint is marked by a flag.



7. Farm Trail

120 points

Rules: The grid represents a farm which is divided into fields. Certain cells are occupied by an animal and these cells cannot touch orthogonally. The number of animals in each field is given. Deduce the positions of the animals and draw a trail which starts and ends at the flag in the top left corner of the grid and visits every cell except for those occupied by a tree or an animal. The trail moves orthogonally between the centre of cells and does not touch or cross itself. Once the trail leaves the first field, it enters the remaining fields exactly once each before returning to the first field again.



Round 3: Classics

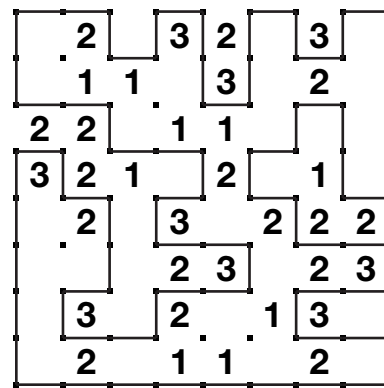
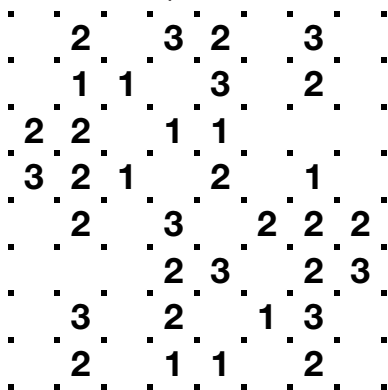
Thursday 14th August 2014, 11:05 - 13:05

120 minutes - 1800 points

1. Slitherlink

40 points

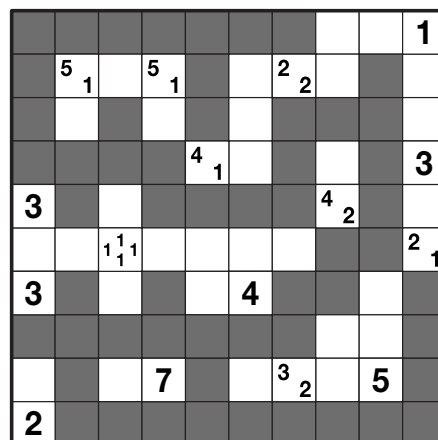
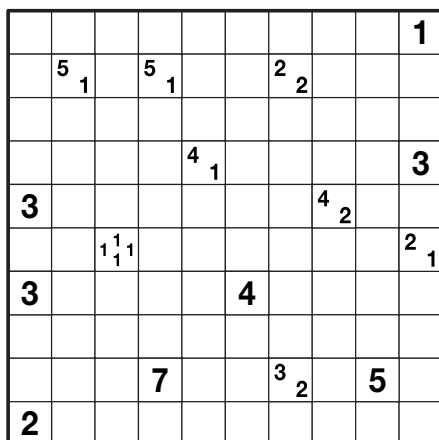
Rules: Draw a single loop by connecting together some dots so that each numbered cell has the specified number of adjacent line segments. Dots can only be joined by straight horizontal or vertical lines. The loop cannot touch, cross or overlap itself in any way.



2 - 3. Tapa

30, 70 points

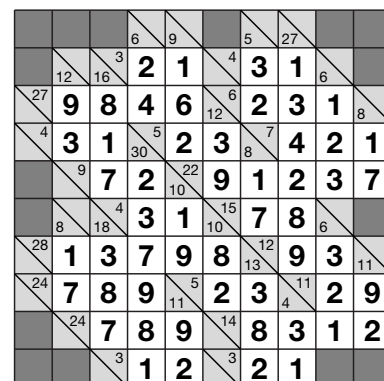
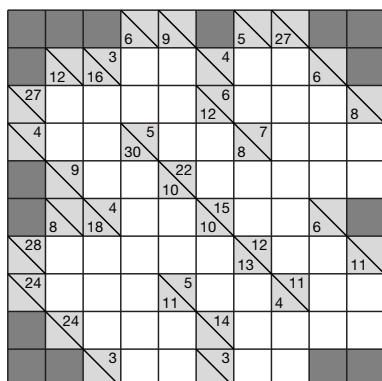
Rules: Shade some cells to create a continuous wall. Numbers in a cell indicate the length of shaded cell blocks in its neighbouring cells. If there is more than one number in a cell there must be at least one unshaded cell between the shaded cell blocks. Shaded cells cannot form a 2×2 square or larger.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



4 - 5. Kakuro

40, 70 points

Rules: Place a digit from 1 to 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.



6. Hitori

50 points

Rules: Shade some cells so that no number repeats in any row or column. Shaded cells cannot touch orthogonally. All unshaded cells must form a single orthogonally connected region.

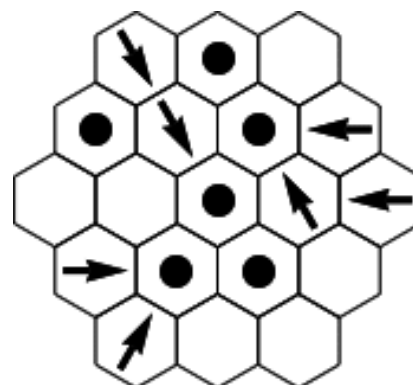
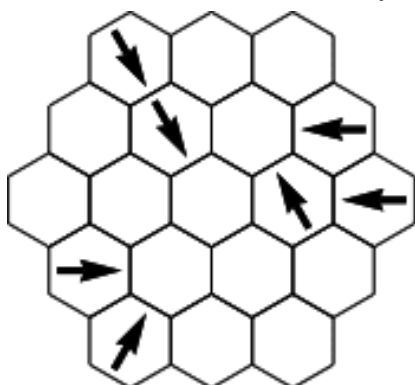
8	8	2	7	8	3	6	1
3	8	4	5	1	2	7	6
1	5	7	3	6	4	2	7
2	4	7	5	3	1	3	8
1	3	6	8	2	4	5	6
7	5	5	1	6	6	2	3
3	2	7	6	5	7	8	7
6	7	1	4	4	8	2	5

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

7 - 8. Pointing at the Crowd

30, 40 points

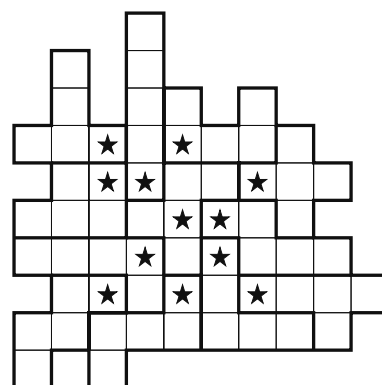
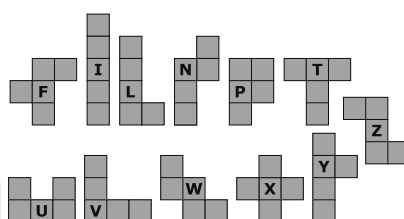
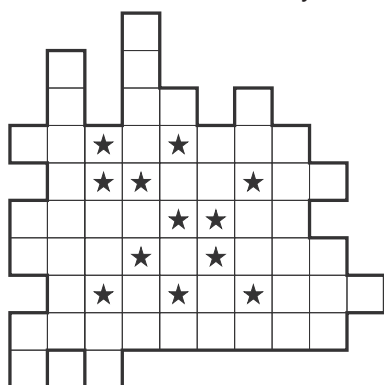
Rules: Place dots in some blank cells so that, for any cell with an arrow, there are more dots in the direction of the arrow than in any other direction.



9 - 10. Pentomino Stars

40, 50 points

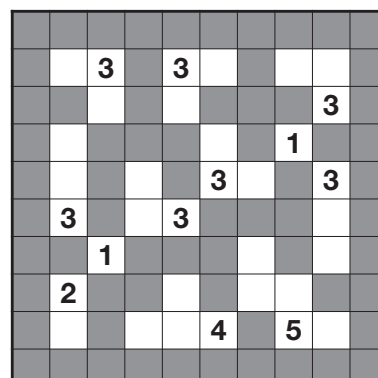
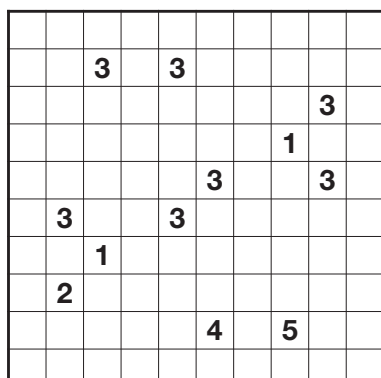
Rules: Divide the grid to form the full set of pentominos, as given. Each pentomino must contain exactly one star. Pentominos may be rotated and reflected.



11 - 12. Nurikabe

50, 70 points

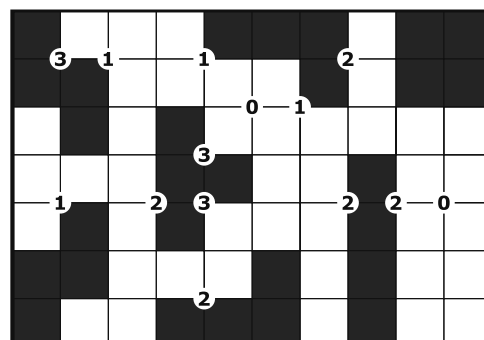
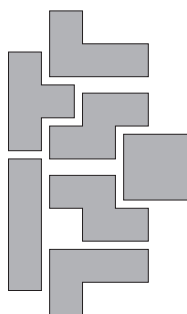
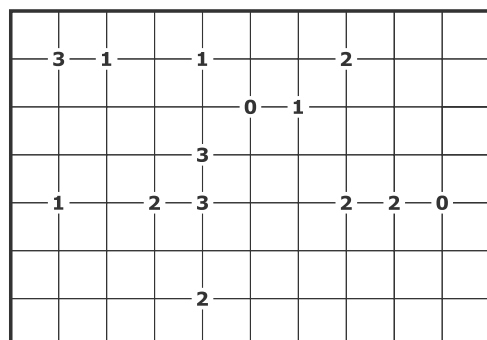
Rules: Shade some cells so that every number in the puzzle remains as part of a continuous unshaded area of precisely the given number of cells. There must be exactly one number per unshaded area. Shaded cells cannot form any 2×2 areas. All shaded cells must form one continuous area. Cells are continuous if they touch orthogonally.



13 - 14. Tetroscope

50, 50 points

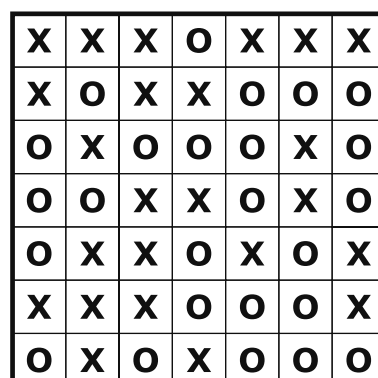
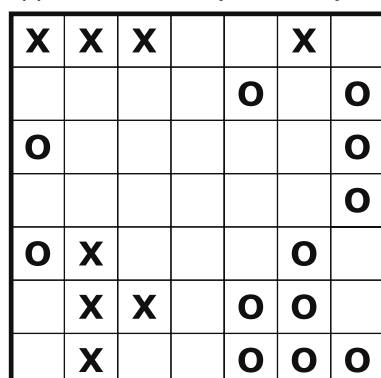
Rules: Place the given complete tetromino set into the grid. Tetrominos can be rotated but not reflected. Tetrominos do not touch, not even diagonally. Clues show the number of neighbouring cells occupied by tetrominos.



15 - 16. No Four in a Row

50, 60 points

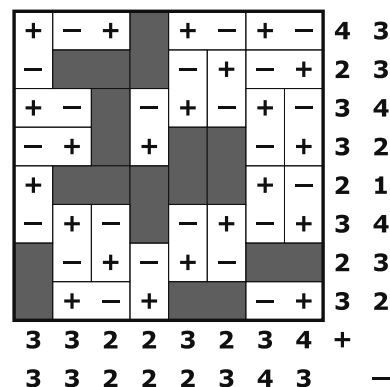
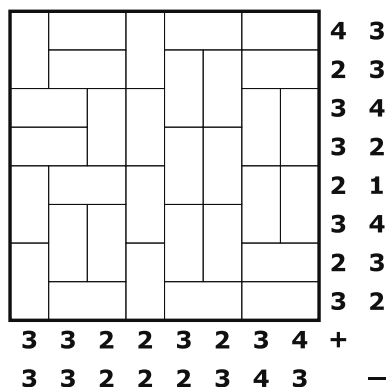
Rules: Place either an 'X' or an 'O' into each empty cell such that four consecutive 'X's or 'O's do not appear horizontally, vertically or diagonally.



17 - 18. Magnets

60, 60 points

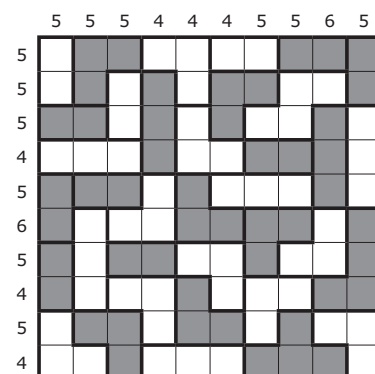
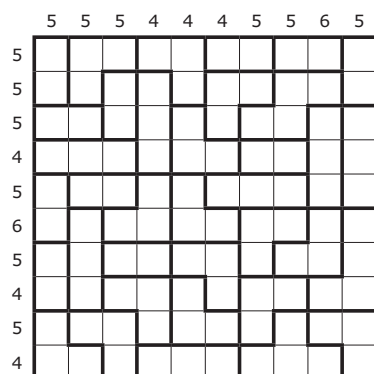
Rules: Complete the diagram with magnetic and shaded non-magnetic tiles. Each magnetic tile has two poles, + and -, with one on each half. Two halves with the same poles cannot touch horizontally or vertically. The numbers at the right and bottom of the diagram indicate how many positive and negative poles appear in that row or column.



19. Crazy Paving

60 points

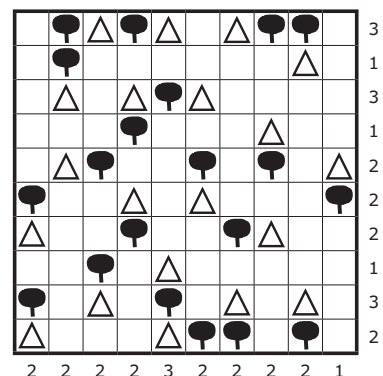
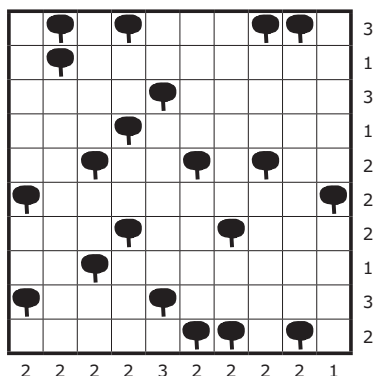
Rules: The grid is divided into a number of outlined regions. Shade some cells so that each region is either completely filled or completely empty. External numbers indicate how many cells are shaded in that row or column.



20. Tents

60 points

Rules: 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.



21 - 22. Suguru

70, 90 points

Rules: Place a digit into every cell. Each bold-outlined region must contain each digit from 1 to the number of cells in that region. Identical digits cannot touch, not even diagonally.

			5		
	3				5
3				2	
	2				
			3		5

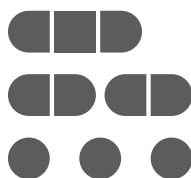
1	4	2	5	1	3
2	3	1	3	2	5
1	5	2	4	1	4
3	4	1	3	2	3
5	2	5	4	1	4
1	4	1	3	2	5

23. Battleships

80 points

Rules: Place the given set of ships into the grid. Ships cannot touch each other, not even diagonally. Clues outside the grid show the number of occupied cells in the corresponding row or column. Ships cannot be in a cell with a wave.

	4		2		2
4					
0		≈			
3					
1					



	4		2		2
4	●	●		●	●
0					
3	●		●		●
1	●				
	●		●		

24. Shikaku

80 points

Rules: Draw solid lines along some of the dashed lines in order to divide the grid up into a set of rectangles, such that every number is inside exactly one rectangle. The number inside each rectangle must be exactly equal to the number of grid cells that the rectangle contains. All grid cells are used.

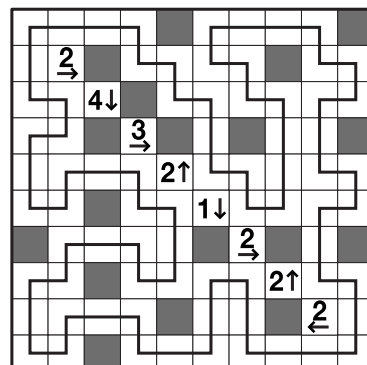
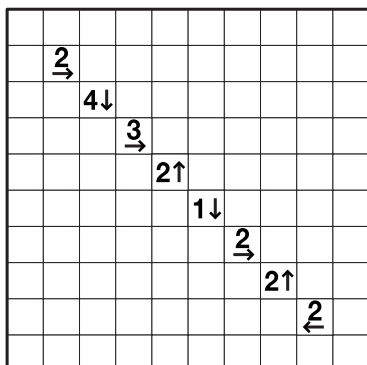
4		4		2
			3	
				3
6				
			3	

4		4		2
			3	
				3
6				
			3	

25 - 26. Yajilin

80, 100 points

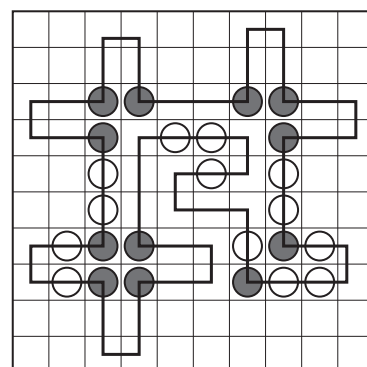
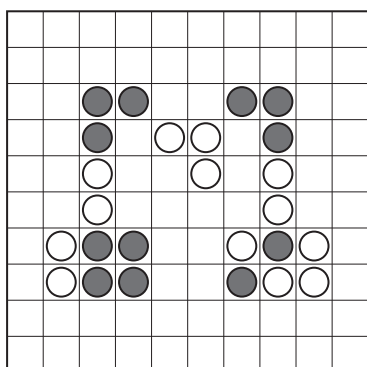
Rules: Draw a single loop using only horizontal and vertical lines such that the loop does not visit any cell more than once. Any cells which the loop does not visit must be shaded. Shaded cells cannot touch orthogonally. Numbers with arrows indicate the exact number of shaded cells in a given direction in a specific row or column, but not all shaded cells are necessarily identified with arrows.



27. Masyu

80 points

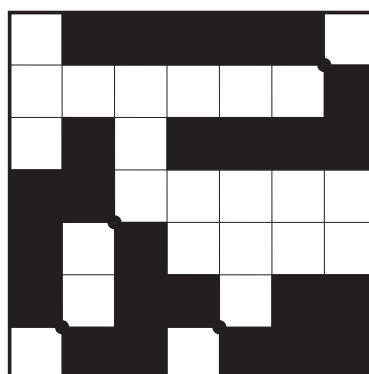
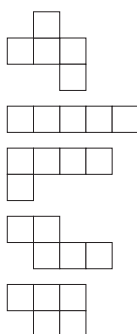
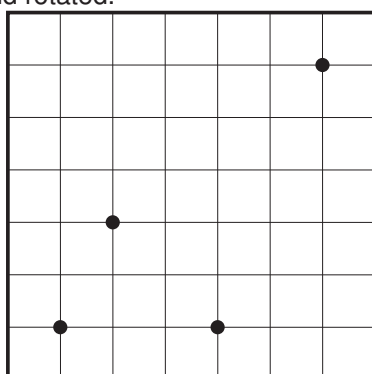
Rules: Draw a single loop using only horizontal and vertical lines between the centres of some cells such that the loop does not visit any cell more than once. At every cell containing a white circle the loop must pass straight through that circle and make a 90 degree turn in at least one of the cells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



28. Touching Pentominos

90 points

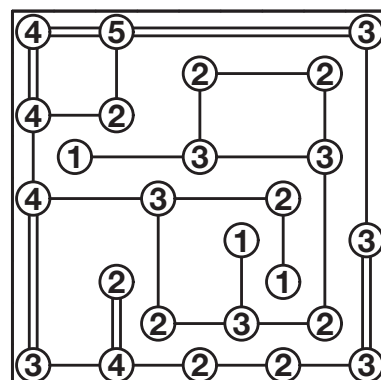
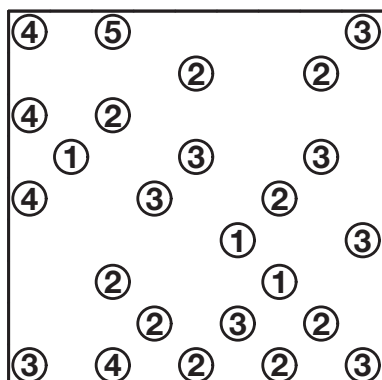
Rules: Place the given pentominos into the grid so that they do not touch horizontally or vertically. Every point where two pentominos touch diagonally is marked with a black dot. Pentominos may be reflected and rotated.



29. Hashi

100 points

Rules: Join circled numbers with horizontal or vertical lines. Each number must have as many lines connected to it as specified by its value. No more than two lines may join any pair of numbers. No lines may cross. The finished layout must allow you to travel from any number to any other number just by following one or more lines.



Round 4: Latin Squares

Thursday 14th August 2014, 14:30 - 15:30

60 minutes - 900 points

1 - 2. Sudoku

20, 50 points

Rules: Place 1 to 9 exactly once each in every row, column and bold-lined 3×3 box.

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

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

3 - 4. Skyscrapers

30, 50 points

Rules: Place a digit from 1 to 6 once each into every row and column inside the grid. Each digit represents a skyscraper with a height equal to the digit. Digits outside the outlined area represent the number of skyscrapers that are visible from that side. Higher skyscrapers hide shorter skyscrapers.

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

	3					1	4	
2	4	1	3	6	2	5		
	5	6	1	2	3	4		2
4	1	2	5	3	4	6		
3	2	4	6	5	1	3		3
3	3	5	4	1	6	2		
	6	3	2	4	5	1		3
							3	4

5 - 6. Fuzuli

30, 50 points

Rules: Place the digits 1, 2, 3 and 4 exactly once each into every row and column. No 2×2 square can be completely filled with digits.

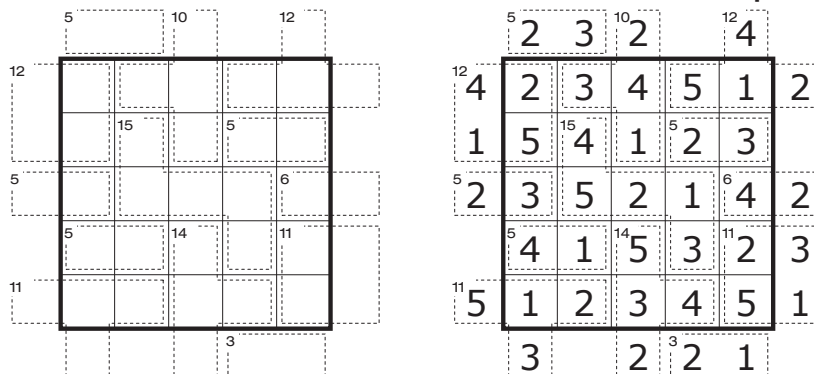
4			2		
	2				
3	1			4	
				2	
					4
		4			1

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

7. Killer Skyscrapers

50 points

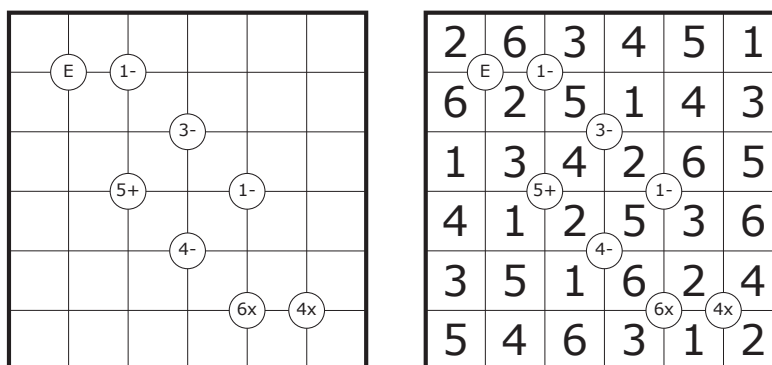
Rules: Place the digits from 1 to 6 (1 to 5 in the example) inside the bold outlined area in every row and column. Each digit represents a skyscraper with a height equal to the digit. Digits outside the outlined area represent the number of skyscrapers that are visible from that side. Higher skyscrapers hide shorter skyscrapers. The small numbers in the upper left corner of the dashed-line regions give the sum of the digits inside that region. Within regions, digits may not repeat. **It is only necessary to write in all digits within the bold outlined area to receive full credit for this puzzle.**



8 - 9. Mathrax

50, 60 points

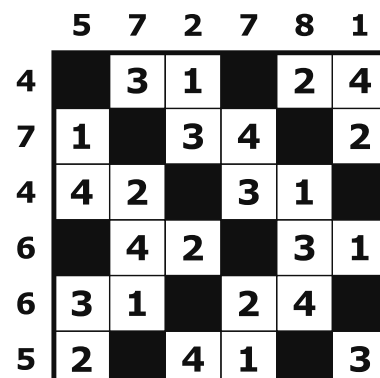
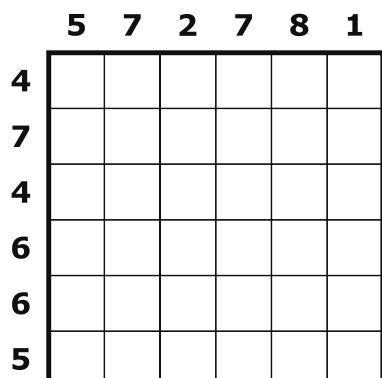
Rules: Place the digits from 1 to 8 (1 to 6 in the example) once each in every row and each column. Some intersections of the grid lines are marked by a number and an operator, +, -, x or /, in a circle. The number is the result of the operation, applied to both pairs of diagonally opposite cells. An "E" in the circle indicates that all four adjacent digits are even; an "O" indicates that all four adjacent digits are odd.



10. Double Block

60 points

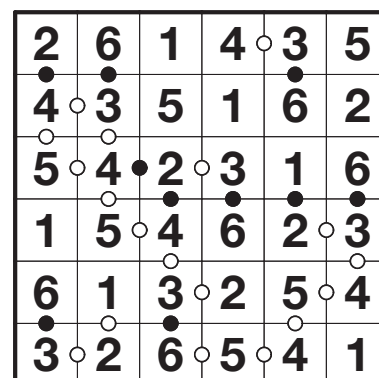
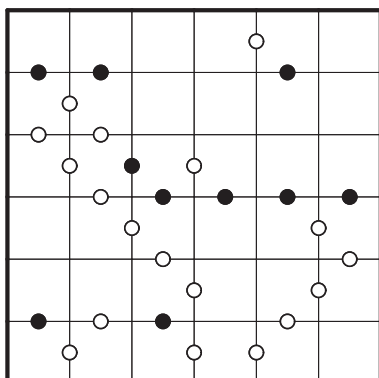
Rules: In each row and column, shade in exactly two cells and fill the remaining cells with each of the digits 1-n, where n is two less than the grid size. The numbers on the outside of the puzzle give the sum of the numbers between the two shaded cells in that particular row or column.



11. Kropki

60 points

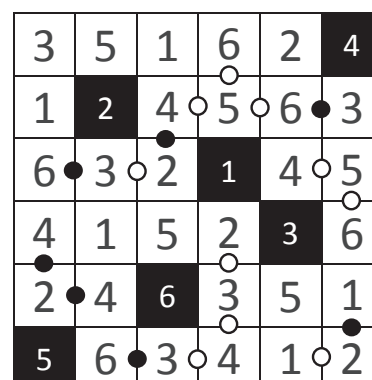
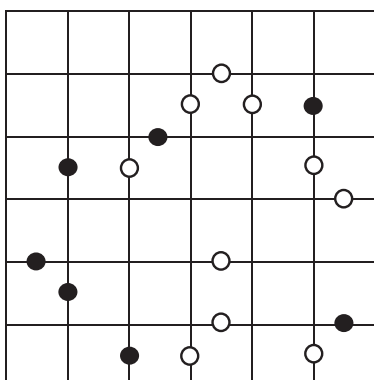
Rules: Place the digits 1-8 (1-6 in the example) once each into every row and column. Cells separated by a white dot must contain digits whose values differ by exactly 1. Cells separated by a black dot must contain digits where one cell is twice the value of the other. All possible dots are shown. Neighbouring cells containing the digits 1 and 2 can be separated by either a black or a white dot.



12. Kropki with Blanks

80 points

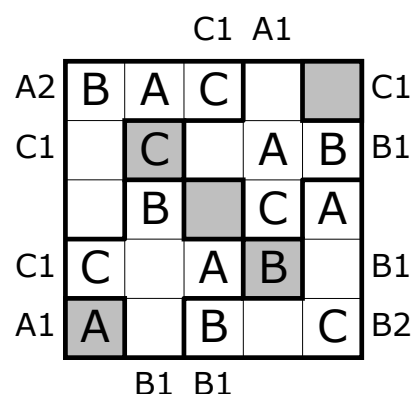
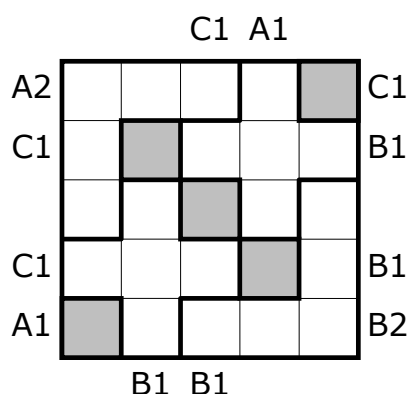
Rules: Place either a digit from 1-8 (1-6 in the example) into each cell or leave it blank (shown shaded in the example). No digit is allowed to repeat in any row or column. Cells separated by a white dot must contain digits whose values differ by exactly 1. Cells separated by a black dot must contain digits where one cell is twice the value of the other. All possible dots are shown. Neighbouring cells containing the digits 1 and 2 can be separated by either a black or a white dot. Exactly one cell in each row and column will remain blank. Each blank represents the same digit removed from both row and column. Each blank represents a different digit (shown in the example for clarity - you do not need to indicate the missing digit in each blank cell in the actual puzzle).



13. Easy as Scattered ABC

50 points

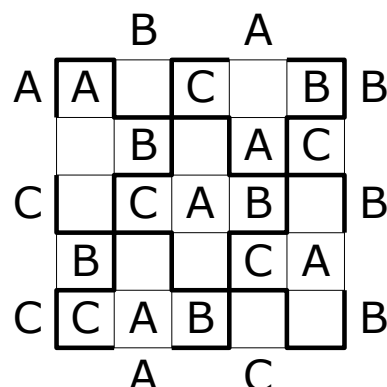
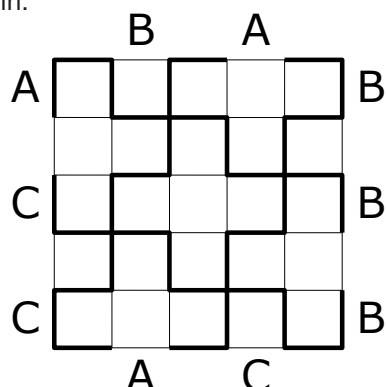
Rules: Place the letters ABCDE (ABC in the example) once each in every row, column, bold outlined irregular area and the given shaded cells. Two cells per row, column, irregular area and shaded cells remain empty. Letters 'x' and numbers 'n' outside the grid indicate that 'x' is the 'n'th letter in that row or column.



14. Easy as Toroidal ABC

60 points

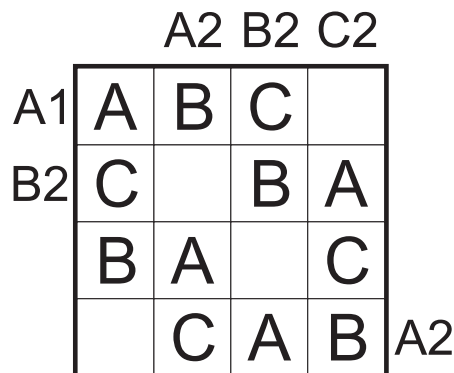
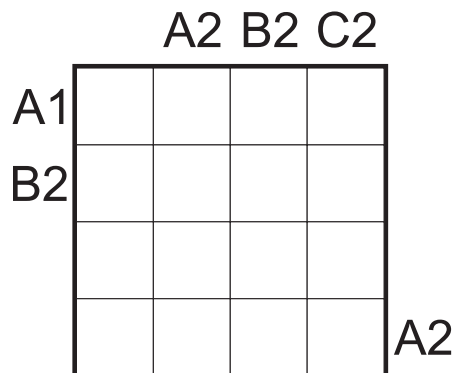
Rules: Place the letters ABCDE (ABC in the example) once each in every row, column and bold outlined irregular area. Some of these areas wrap around the grid from top to bottom or from left to right. Two cells per row, column and area remain empty. Clues outside the grid indicate the first letter found in that row or column.



15 - 16. Easy As ABCDE Numbers

60, 70 points

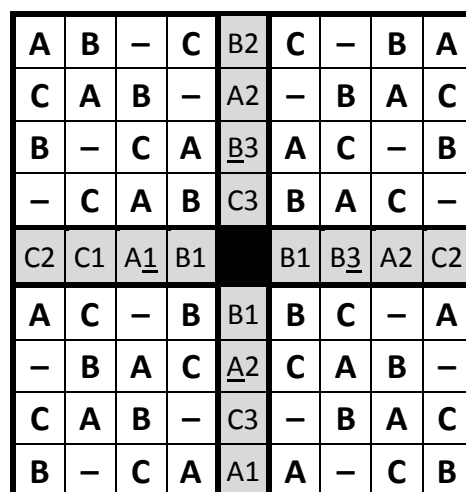
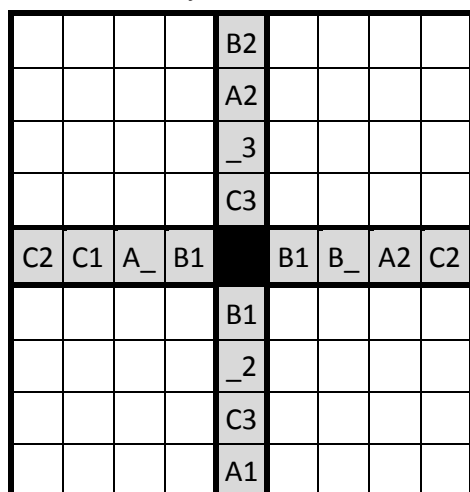
Rules: Enter the letters ABCDE (ABC in the example) into the grid so that each row and column contains each letter exactly once. Some cells will remain empty. Letters 'x' and numbers 'n' outside the grid indicate that 'x' is the 'n'th letter in that row or column.



17. Easy as ABCD 4-grid

70 points

Rules: Place letters in some cells so that the letters A-D (A-C in the example) appear exactly once in each row and column of the 4 separate grids. One cell will remain blank in each row and column. Outside clues indicate the position of a particular letter reading along its row or column and ignoring blank cells, so for example C4 means that C will be the fourth letter encountered in that row or column. Every clue is valid for both grids that it neighbours. Some clues have either their letter or their number missing, where the missing letter or number must be deduced in each case so that these clues are also valid for both grids. Only the four unshaded puzzle grids need to be completed to receive full credit - it is not necessary to write in all of the clues.



Round 5: On Your Own

Thursday 14th August 2014, 15:45 - 16:30

45 minutes - 600 points

1 - 9. ??? 50, 30, 30, 40, 60, 70, 100, 100, 120 points

Rules: This round contains six puzzle types. Each puzzle type occupies two pages. On the left page a full-size example is given along with the correct solution. These are labelled EXAMPLE and SOLUTION, written as below. An incorrect solution may also be presented in which the error or errors are highlighted; this solution will be labelled INCORRECT SOLUTION, written as below. On the right page either one or two puzzles using the rules implied by this example are given. **In order to receive credit for a puzzle, all of the elements added to the solution graphic must also be added to your own solution, and if there are multiple grids for the same puzzle then you must complete all of them to receive any credit.**

EXAMPLE

SOLUTION

INCORRECT SOLUTION

Round 6: Sprint

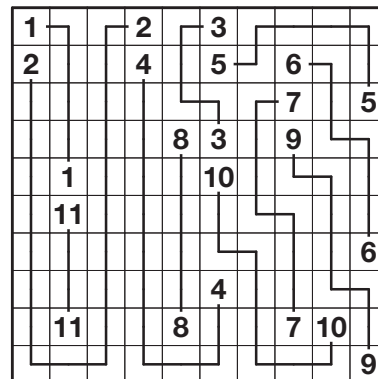
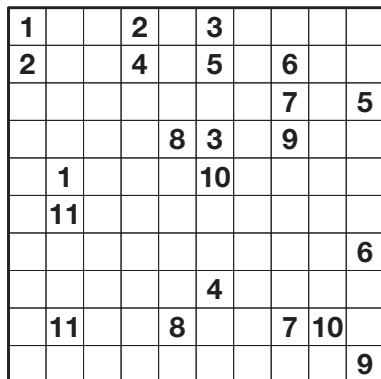
Thursday 14th August 2014, 16:45 - 17:15

30 minutes - 600 points

1 - 2. Numberlink

10, 30 points

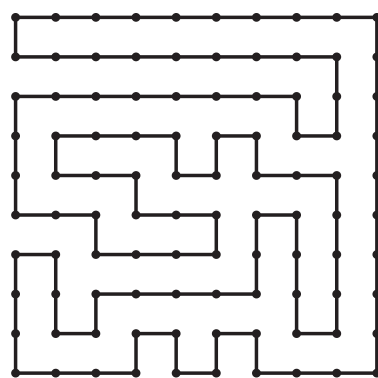
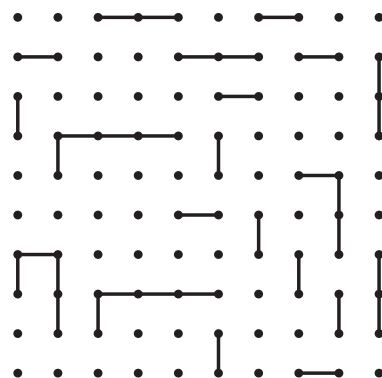
Rules: Draw a series of separate paths, each connecting a pair of identical numbers. No more than one line can enter any cell, and lines can only travel horizontally or vertically between cell centres.



3. Fences

20 points

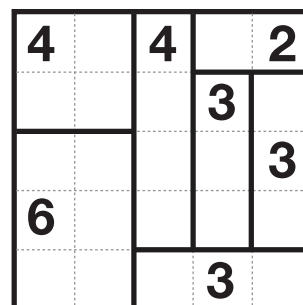
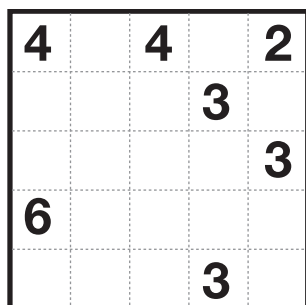
Rules: Draw a loop that visits every dot. The loop cannot cross or touch itself at any point. Only horizontal and vertical lines between dots are allowed. Some parts of the loop are already given.



4. Shikaku

30 points

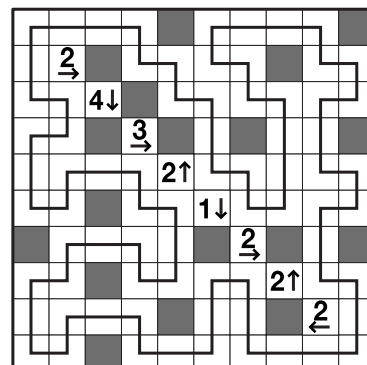
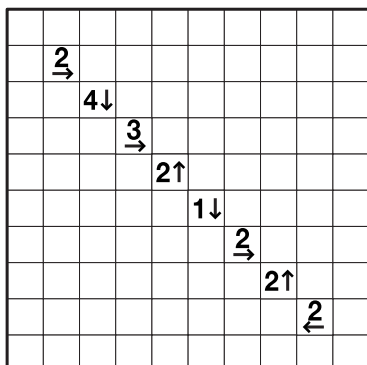
Rules: Draw solid lines along some of the dashed lines in order to divide the grid up into a set of rectangles, such that every number is inside exactly one rectangle. The number inside each rectangle must be exactly equal to the number of grid cells that the rectangle contains. All grid cells are used.



5. Yajilin

40 points

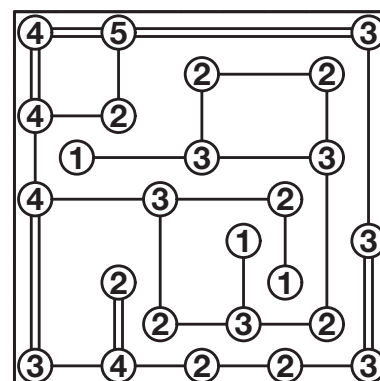
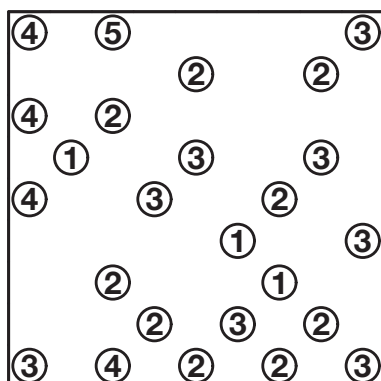
Rules: Draw a single loop using only horizontal and vertical lines such that the loop does not visit any cell more than once. Any cells which the loop does not visit must be shaded. Shaded cells cannot touch orthogonally. Numbers with arrows indicate the exact number of shaded cells in a given direction in a specific row or column, but not all shaded cells are necessarily identified with arrows.



6. Hashi

30 points

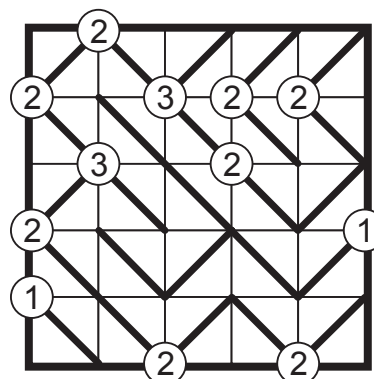
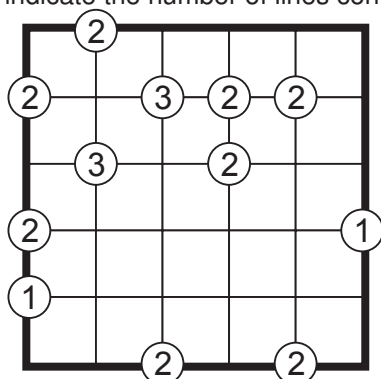
Rules: Join circled numbers with horizontal or vertical lines. Each number must have as many lines connected to it as specified by its value. No more than two lines may join any pair of numbers. No lines may cross. The finished layout must allow you to travel from any number to any other number just by following one or more lines.



7 - 8. Slalom

30, 30 points

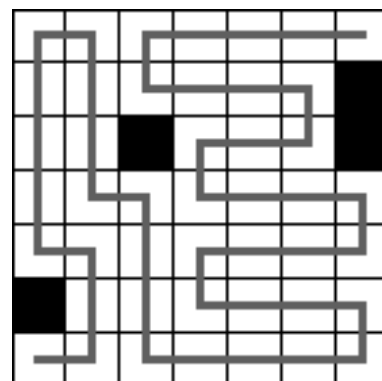
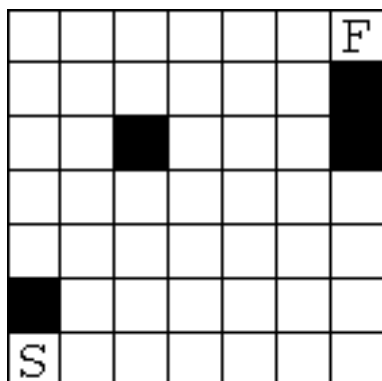
Rules: Draw a diagonal line through each cell. Diagonal lines never form a closed loop. Numbers in circles indicate the number of lines connected to that circle.



9 - 10. Unequal Length Maze

20, 20 points

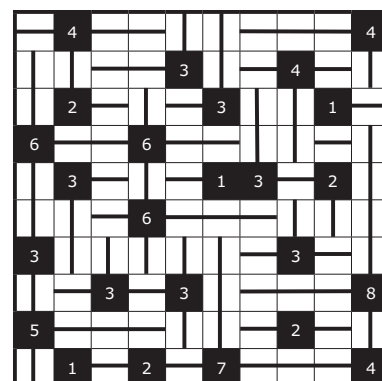
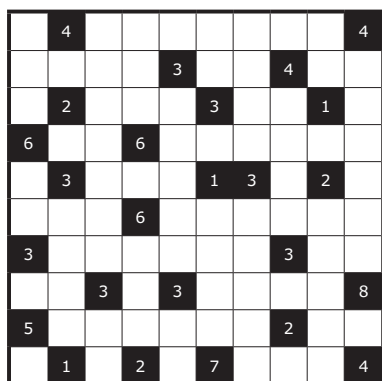
Rules: Find a path from the bottom left to the top right passing through every empty cell exactly once. The path must alternate horizontal and vertical segments, and no two consecutive segments can be the same length.



11 - 12. Walls

30, 40 points

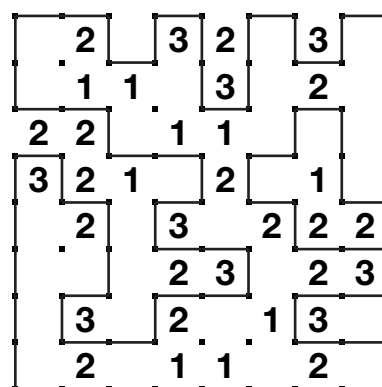
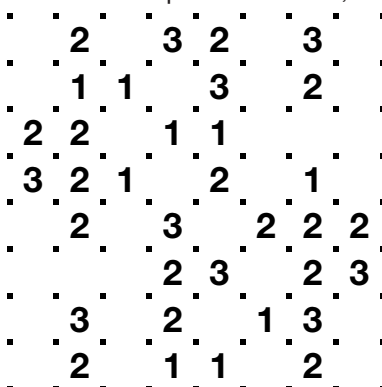
Rules: Draw a single horizontal or vertical line across the full width or height of the centre of every white cell, such that the total length of all lines touching each black cell is equal to the given number of cells.



13 - 14. Slitherlink

40, 40 points

Rules: Draw a single loop by connecting together some dots so that each numbered cell has the specified number of adjacent line segments. Dots can only be joined by straight horizontal or vertical lines. The loop cannot touch, cross or overlap itself in any way.



15 - 16. Toroidal Numberlink

30, 30 points

Rules: Draw a series of separate paths, each connecting a pair of identical numbers. Paths are drawn by joining neighbouring cell centres, not including diagonally neighbouring cells. No more than one path can enter any cell. Paths can travel off one end of a row or column and re-enter at the opposite end of the same row or column, respectively.

		1		
2	1	2	3	4
3				
4				

		1		
2	1	2	3	4
3				
4				

17. Tapa

30 points

Rules: 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 2×2 square or larger. There are no wall segments on cells containing numbers.

								1
	5 ₁		5 ₁			2 ₂		
				4 ₁				3
3						4 ₂		
		1 ₁ 1 ₁						2 ₁
3				4				
			7			3 ₂		5
2								

								1
	5 ₁		5 ₁			2 ₂		
				4 ₁				3
3						4 ₂		
		1 ₁ 1 ₁						2 ₁
3				4				
			7			3 ₂		5
2								

18 - 19. No Four in a Row

50, 50 points

Rules: Place either an 'X' or an 'O' into each empty cell such that four consecutive 'X's or 'O's do not appear horizontally, vertically or diagonally.

X	X	X			X	
				O		O
O						O
						O
O	X				O	
	X	X		O	O	
	X			O	O	O

X	X	X	O	X	X	X
X	O	X	X	O	O	O
O	X	O	O	O	X	O
O	O	X	X	O	X	O
O	X	X	O	X	O	X
X	X	X	O	O	O	X
O	X	O	X	O	O	O

Round 7: TEAM: Table for Four

Thursday 14th August 2014, 17:45 - 18:45

60 minutes - 3600 points

Table for Four

Rules: Nothing may be brought into the competition hall for this round except for drinks or medical essentials. In particular no stationery, including pens or pencils, of any kind is allowed. Each team will be given four coloured biro pens - red, green, blue and black. **Once a player has chosen a colour, they *cannot* under any circumstance give that pen to another player. Only they can write in that colour. Any team breaching this rule will score zero points for the entire round.**

Players are seated on four sides of a table, and each player chooses a coloured biro pen from the four provided and should sit in the seat labelled with their colour. For each puzzle in the round, a large 9×9 puzzle grid is placed on the table. The grid is labelled with a coloured pen on each side so that it can be correctly oriented to face the players correctly. Each player must write on the grid only in their own colour so that the rules of the individual puzzle are satisfied. Clues written outside the grid apply only to the player towards which the clue is orientated, and are written in that player's colour for clarity.

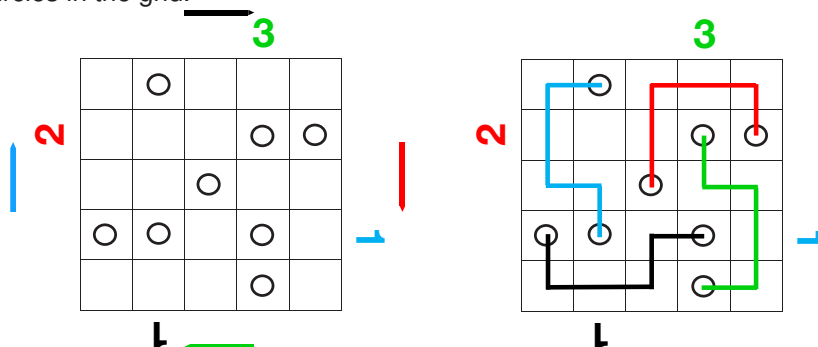
In every puzzle, only one colour can be used in any grid cell. A full solution to each puzzle will involve 20 cells being marked with each colour and one grid cell remaining empty. If mistakes are made then players can cross out their errors however they wish so long as the final solution is clear. A limited supply of white stickers will also be available where major correction is needed - details will be provided closer to the time.

Once players are satisfied that they have completed a puzzle, or otherwise wish to go on, they should raise their hands. An invigilator will take their puzzle and give them the next one, irrespective of whether the puzzle is complete or correct. There is no option to return to an earlier puzzle. After the final puzzle is submitted the team's time will be noted, so that bonus points can be awarded if they have solved all puzzles correctly.

1. Snake Pit

300 points

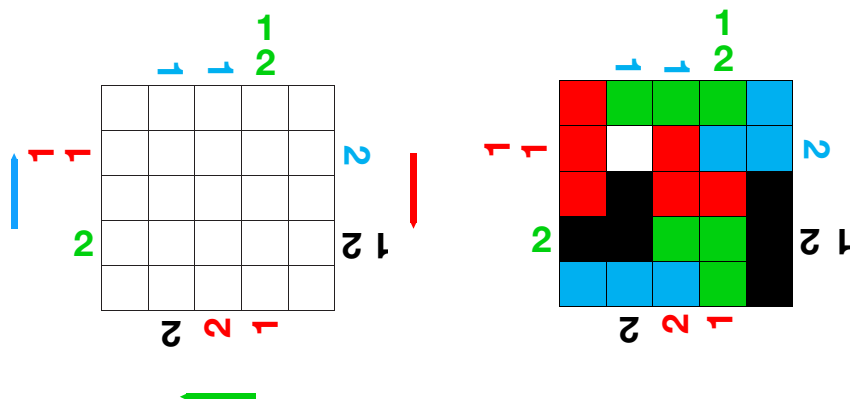
Rules: Place 2 snakes, each of length 10 (1 snake of length 6 in the example) in the grid, where a snake consists of orthogonally connected cells. The 2 snakes cannot touch either themselves or each other, not even diagonally. Clue numbers above and to the left of the grid represent the number of snake segments in the corresponding columns and rows respectively. The heads and tails of both snakes will be marked by circles in the grid.



2. Paint it Black Tetrominos

900 points

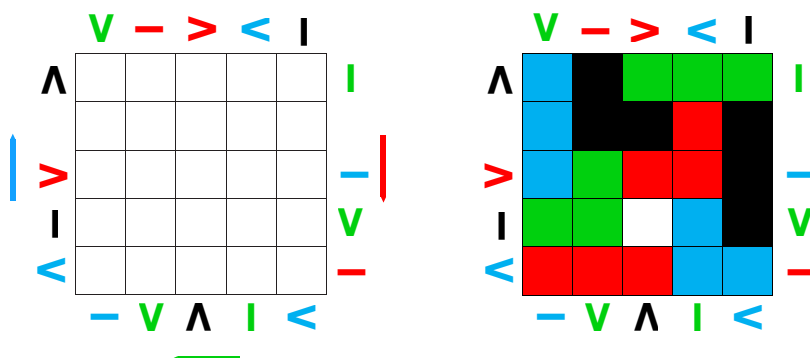
Rules: Place the full set of 5 different tetrominos (2 triminos in the example) into the grid. Tetrominos cannot touch each other, not even diagonally. Clue numbers above and to the left of the grid provide the length of consecutive blocks of tetromino cells in the corresponding columns and rows respectively. The clue numbers are in the correct order and there must be at least one space between blocks. The 5 tetromino shapes will be provided.



3. Easy as Pentomino

1200 points

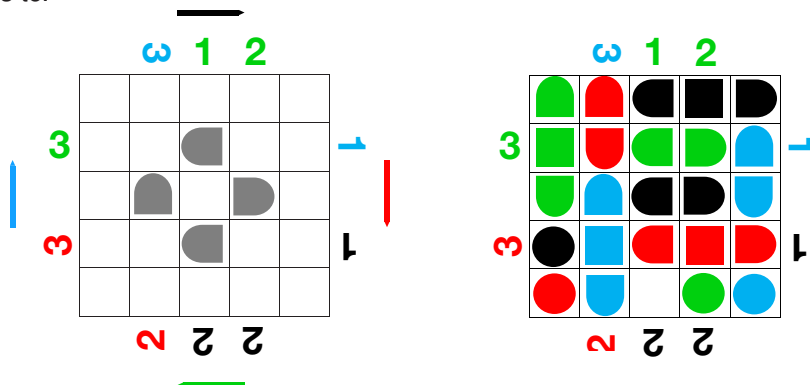
Rules: Place 4 different pentominoes (2 different triminos in the example) into the grid. Pentominoes cannot touch each other, not even diagonally. Clue letters outside the grid represent the first pentomino visible in the corresponding row or column. The 12 possible pentomino shapes and their identifying letters will be provided. Pentominoes can be rotated and reflected.



4. Battleship

1200 points

Rules: Place the given set of ships into the grid. Ships cannot touch each other, not even diagonally. Clues outside the grid show the number of occupied cells in the corresponding row or column. Some ship segments are given on the grid in grey - it is up to your team to determine which colour ship each segment belongs to.



Round 8: English Country Garden

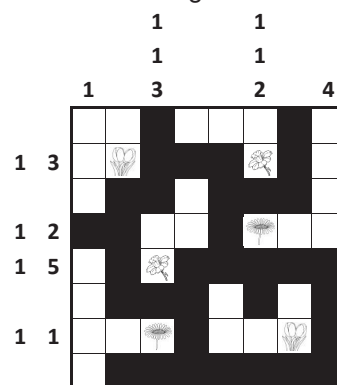
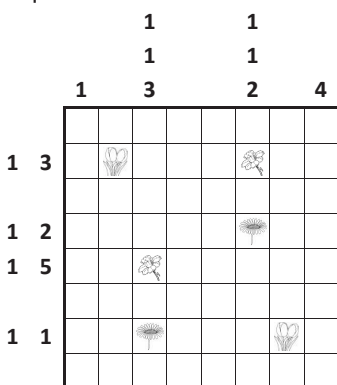
Friday 15th August 2014, 09:00 - 10:00

60 minutes - 900 points

1 - 4. Flowerbeds

30, 40, 60, 90 points

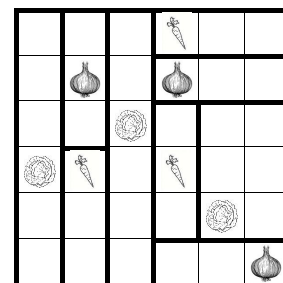
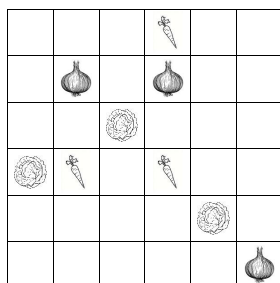
Rules: The grid represents a garden plot. Shade some cells to represent paving stones. The paved region must be continuous and must subdivide the plot into flowerbeds. Flowerbeds cannot touch each other, not even diagonally. The paved region must not contain any 2×2 block of paving stones. The numbers outside the grid represent consecutive groups of paving stones in the corresponding row or column **but not necessarily in the correct order**. Each bed is used to grow a single type of flower and each bed must contain exactly one identifying label. Beds containing the same type of flower must be equal in area. Different flowers may have beds of the same size. All flowerbed labels are given.



5 - 6. Vegetable Plots

30, 60 points

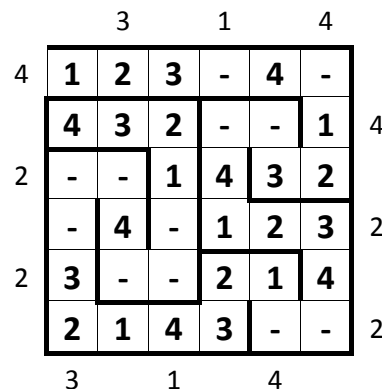
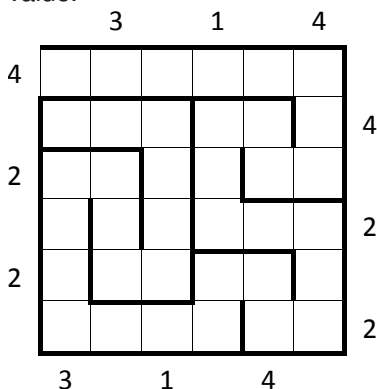
Rules: The grid represents a vegetable garden. Divide the grid along the gridlines into rectangular or square vegetable plots. Each plot is used to grow a single type of vegetable and each plot must contain exactly one identifying label. Plots containing the same type of vegetable must be equal in area and must not touch along an edge. Different vegetables may have plots of the same size.



7 - 8. Snail Skyscrapers

60, 70 points

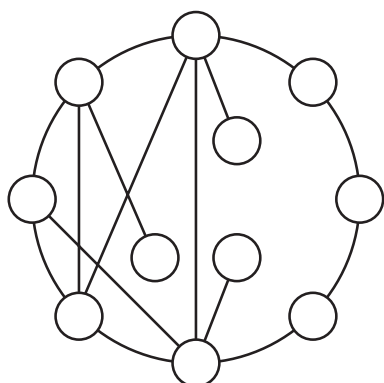
Rules: Place the digits 1-4 in order repeatedly along the spiral path, starting from the top-left corner, so that each digit appears exactly once in each row and column. Some cells will remain empty. Place digits in the grid so that each given clue number outside the grid represents the number of digits that can be 'seen' from that point, looking only at that clue's row or column. A digit with a higher value always obscures a digit with a lower value, while a digit with a lower value never obscures a digit with a higher value.



9. Word Cobweb

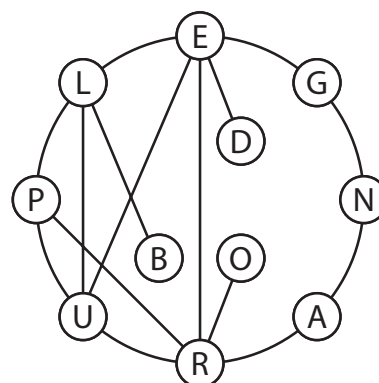
90 points

Rules: Place a letter into every cell so that each word in the provided word list can be spelled by travelling from cell to cell along the designated paths. Every cell should have a different letter and the list of all letters is provided. A word may reuse a path as many times as is necessary, and all paths are used at least once.



ABDEGLNOPRU

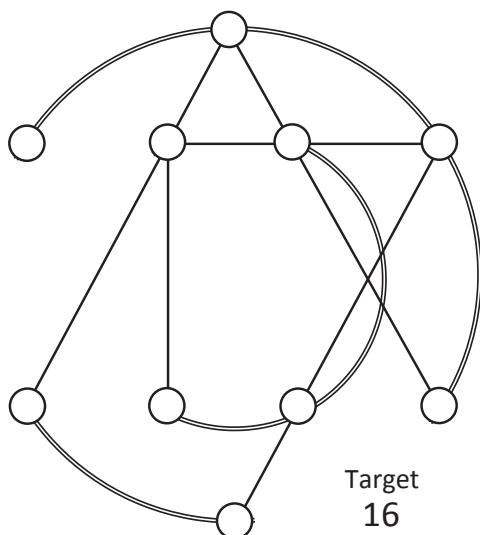
BLUE
ORANGE
PURPLE
RED



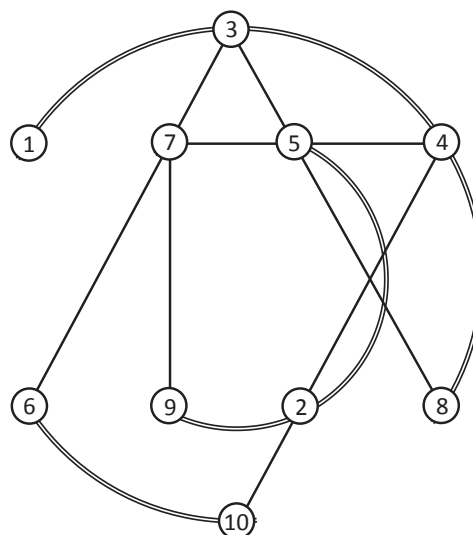
10. Number Cobweb

120 points

Rules: Place a number from 1-16 (1-10 in the example) into each cell. Cells lying on a marked straight line must contain numbers which add to the given target total. Similarly, cells lying on a marked arc must contain numbers which add to the given target total.



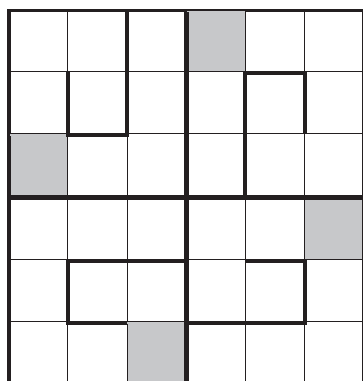
Target
16



11 - 12. Hitori Snails

90, 160 points

Rules: Place each of the given names in one of the spirals, reading inwards from the start of the spiral to its centre. Letters cannot repeat in rows or columns. Cells which are not occupied by a letter should be shaded. Shaded cells cannot touch orthogonally and unshaded cells must all be connected orthogonally. Some shaded cells are already marked.



HAMLET
KINGLEAR
MACBETH
OTHELLO

	E	H		A	C
L	T		M	H	B
	M	A		T	E
T		O	E	L	
H	O	L	A	R	G
E	L		K	I	N

Round 9: Loop the Loop

Friday 15th August 2014, 10:15 - 11:15

60 minutes - 900 points

1 - 2. Ripple Loop

20, 60 points

Rules: Draw a loop which visits every cell in the grid. The loop moves horizontally and vertically between the centre of cells and does not touch or cross itself. Along the loop, identical digits of value N must be separated by at least N other cells.

6	3	2	2	6	3
4	2	1	5	1	2
3	5			5	2
2	4			6	3
1	6	4	2	1	2
3	2	5	3	5	4

6	3	2	2	6	3
4	2	1	5	1	2
3	5			5	2
2	4			6	3
1	6	4	2	1	2
3	2	5	3	5	4

3. Hiking Path

40 points

Rules: A closed loop must be drawn in the grid. The loop can only travel horizontally and vertically and must pass through each cell exactly once. The loop must make a turn in every cell which contains a number; the number indicates the sum of the lengths of the two segments from the respective cell to the next turn in each direction of the loop.

	3				2
			4		
5					
					5
				7	
	6				

	3				2
			4		
5					
					5
				7	
	6				

4. Pentomino Loop

60 points

Rules: Draw a single closed loop along the grid lines. The loop does not cross or touch itself. Numbers in the grid indicate how many sides of some cells are used by the loop. Every cell in the loop must form part of one of the 12 pentominos (6 in the example) so that 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 mirrored. No pentomino is used more than once. The pentomino shapes must all be clearly marked on your solution to receive credit.

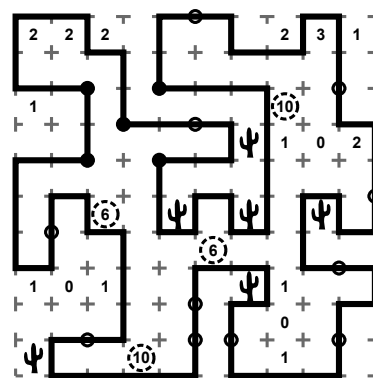
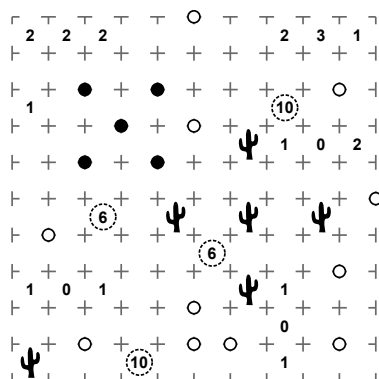
1	2	3	2	3	2
3	1			3	2
	3		2	2	1
3	1				2
	2		1	1	1
1	2			3	3
0	1	2	2	2	2

1	2	3	2	3	2
3	1			3	2
	3		2	2	1
3	1				2
	2		1	1	1
1	2			3	3
0	1	2	2	2	2

5 - 6. Area 51

70, 80 points

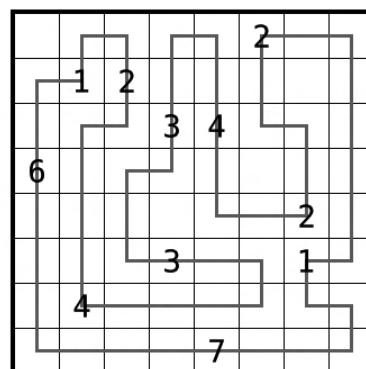
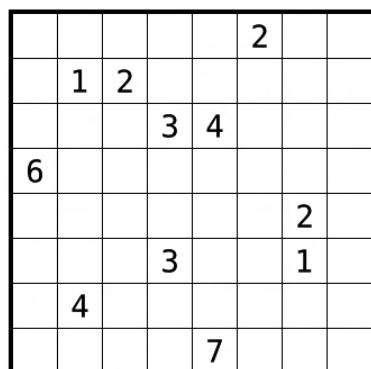
Rules: Draw a single loop that does not touch or cross itself. A cell containing a digit must be surrounded by that many loop segments. Circled number pods must be inside the loop and show how many interior cells can be seen up, down, left, and right from that cell, including itself. Cactus cells must be on the outside of the loop. 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.



7. Straight Loop

100 points

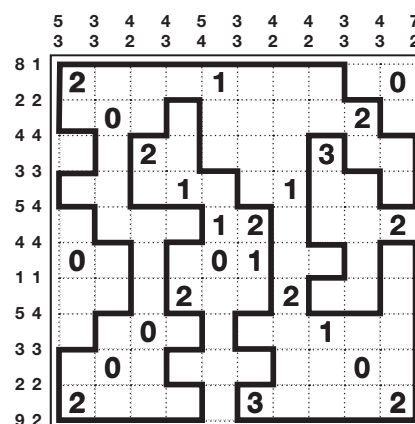
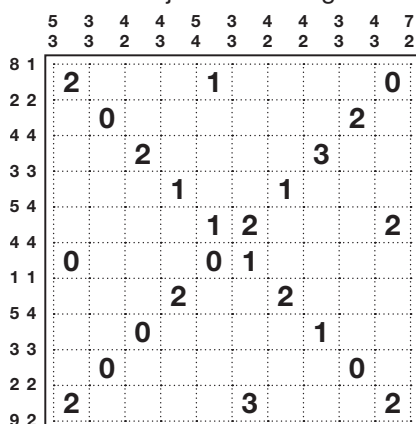
Rules: Draw a single loop that travels horizontally and vertically between cell centres and that passes through each clue. If the loop passes straight through a clue, without turning, then the clue gives the length of the straight segment on which it lies. If the loop forms a corner at a clue, then the clue gives the length of each straight segment meeting at the corner. The loop does not necessarily visit every cell.



8. In the Loop

100 points

Rules: Draw a single loop along some of the grid lines that does not touch or cross itself. The first number outside the grid tells you the number of loop sections along the grid line they are adjacent to. The second number tells you the number of groups of paths along that grid line. For example, '5 3' tells you that there are 5 sections of path divide into 3 groups. Clue numbers inside the grid tell you the number of adjacent line segments that form part of the loop.



120 points

Figure 1 consists of two diagrams illustrating the construction of a 2D grid. The left diagram shows a grid of points with numerical values assigned to each point. The right diagram shows the same grid with a path highlighted by a thick black line, representing a sequence of points.

Left Diagram (Grid Construction):

The grid is a 10x10 array of points. The values assigned to the points are as follows:

Row \ Column	1	2	3	4	5	6	7	8	9	10
1		3	4	2	3					5
2		5	4	2	4	8	2			3
3		3	2	2	2	2	4	9		5
4	7	3	*	*	*	*	*	*	*	*
5	3	4	*	*	*	*	*	*	*	*
6	2	2	*	*	*	*	*	*	*	*
7	4	4	*	*	*	*	*	*	*	*
8	4	4	*	*	*	*	*	*	*	*
9	7	2	*	*	*	*	*	*	*	*
10	5	*	*	*	*	*	*	*	*	*

Right Diagram (Path Construction):

The grid is the same as the left diagram. A path is highlighted by a thick black line, representing a sequence of points. The path starts at the point (1, 10) and ends at the point (10, 1). The path is defined by the following sequence of points (Row, Column):

- (1, 10)
- (2, 10)
- (3, 10)
- (3, 9)
- (3, 8)
- (3, 7)
- (3, 6)
- (3, 5)
- (3, 4)
- (3, 3)
- (3, 2)
- (3, 1)
- (4, 1)
- (5, 1)
- (6, 1)
- (7, 1)
- (8, 1)
- (9, 1)
- (10, 1)

120 points

and circles had to be located in the top:

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

130 points

The figure consists of two side-by-side diagrams. The left diagram is a 10x10 grid of dots. Numbers 0, 1, 2, and 3 are placed at specific dot positions: Row 1: (1,1)=0, (1,2)=1, (1,5)=2, (1,7)=3, (1,9)=1; Row 2: (2,1)=2, (2,4)=0, (2,6)=0, (2,8)=0; Row 3: (3,3)=3, (3,5)=2, (3,7)=1; Row 4: (4,1)=1, (4,3)=1, (4,6)=1, (4,9)=3; Row 5: (5,3)=0, (5,6)=2, (5,8)=1; Row 6: (6,7)=3; Row 7: (7,1)=1, (7,3)=1, (7,5)=2, (7,9)=3; Row 8: (8,1)=3, (8,2)=3, (8,4)=1, (8,7)=3, (8,9)=2. The right diagram shows the same grid with lines connecting the dots to form a 3D structure. The numbers represent the height of the columns. For example, column 1 has height 3, column 2 has height 3, column 3 has height 3, column 4 has height 1, column 5 has height 2, column 6 has height 2, column 7 has height 3, column 8 has height 1, column 9 has height 3, and column 10 has height 2.

Round 10: The 200 Club

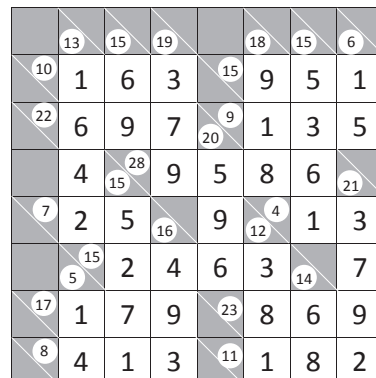
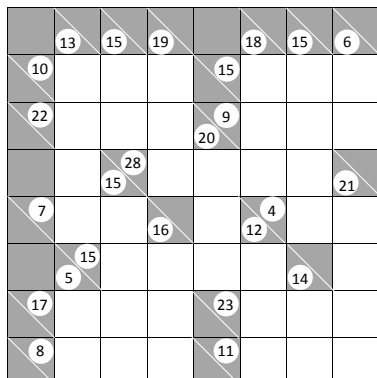
Friday 15th August 2014, 11:30 - 13:00

90 minutes - 2000 points

1. Non-consecutive Kakuro

200 points

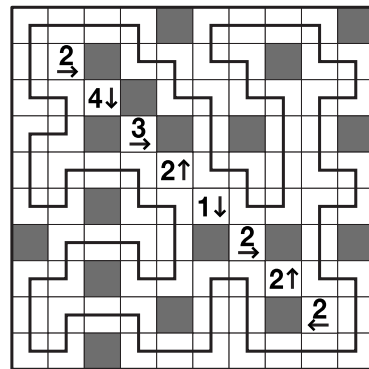
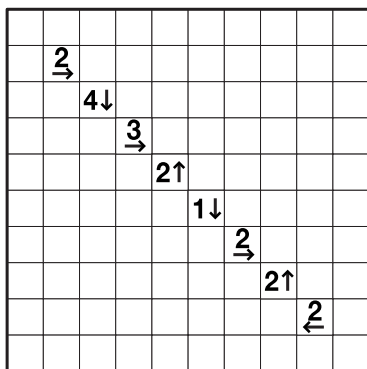
Rules: Place a digit from 1 to 9 into each white cell. Each horizontal run of white cells adds up to the total above the diagonal line to the left of the run, and each vertical run of white cells adds up to the total below the diagonal line above the run. No digit can be used more than once in any run. Neighbouring cells cannot contain consecutive digits.



2. Yajilin

200 points

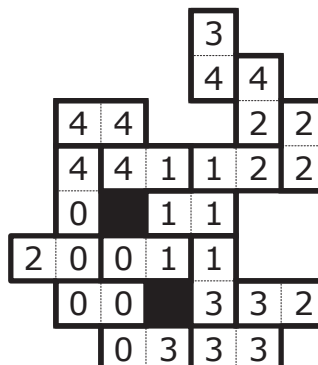
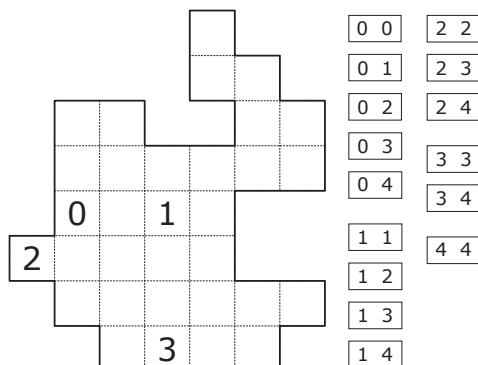
Rules: Draw a single loop using only horizontal and vertical lines such that the loop does not visit any cell more than once. Any cells which the loop does not visit must be shaded. Shaded cells cannot touch orthogonally. Numbers with arrows indicate the exact number of shaded cells in a given direction in a specific row or column, but not all shaded cells are necessarily identified with arrows.



3. Blackout Dominoes

200 points

Rules: Shade some cells and place all given dominoes into the grid so that they don't overlap each other. Two orthogonal neighbouring cells from different dominoes must be equal. Shaded cells may not touch the border orthogonally and they may not touch each other orthogonally.



4. Pentominos in Half

200 points

Rules: The complete set of pentominos was placed into two grids, with six pentominos in each grid. The distances between the edge of the grid and the nearest pentomino were found for both grids and then added to give the clues. Restore the positions of the pentominos. Rotations and reflections of pentominos are allowed. Pentominos cannot touch each other, not even diagonally.

11 2 4 1 3 4 4 4 3

7 2 2 4 1 5 1 0 0

0 7 2 7 3 1 6 0 6

I L N P T Z U V W X Y

→

4 1 1 0 3 3 1 1 2

3 1 1 3 0 0 0 0 0

0 6 0 0 3 0 1 0 6

7 1 3 1 0 1 3 3 1

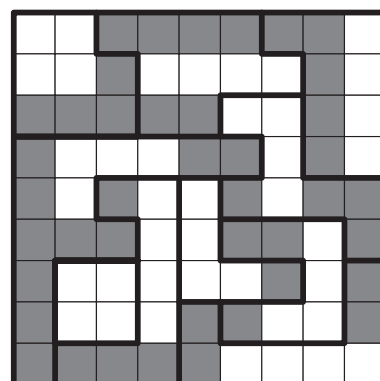
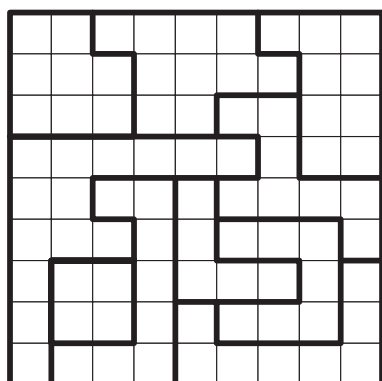
4 1 1 1 1 5 1 0 0

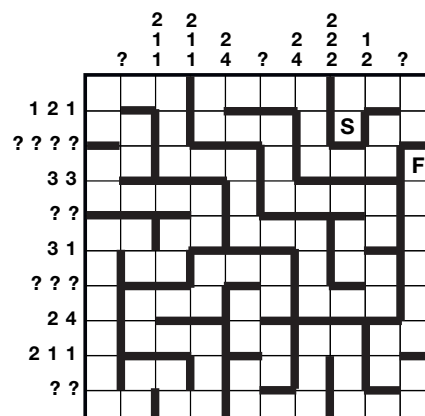
0 1 2 7 0 1 5 0 0

5. Inverted LITS

200 points

Rules: Shade some cells, such that 1 the remaining white cells within an area form a single tetromino, 2 all shaded cells are connected, 3 there is no 2-by-2 square consisting entirely of shaded cells, and 4 no two of the same kind of tetromino touch along an edge, irrespective of rotation or reflection. White areas with size of 2×2 or larger, even within the same area, are allowed. This means, in contrast to standard LITS rules, the O-tetromino is also allowed.

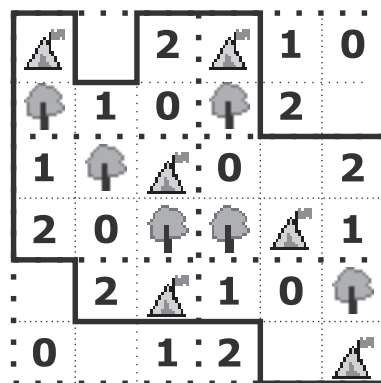
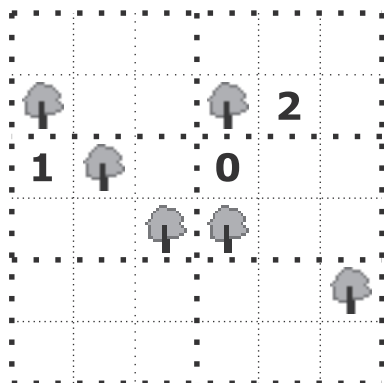




9. 3-in-1 Tents-Sudoku-Slitherlink

200 points

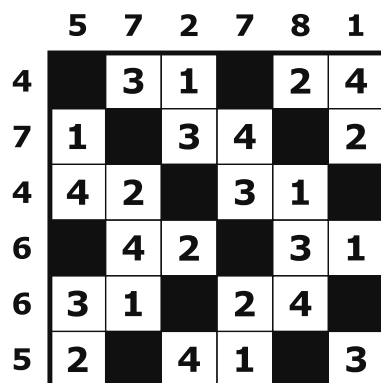
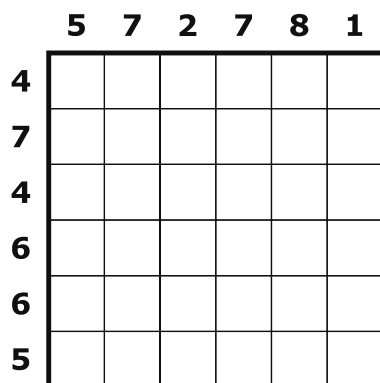
Rules: For each tree, place one tent in an orthogonally adjacent empty cell. Cells containing tents cannot touch, not even diagonally. Then place the digits 0, 1, 2, 3 (0, 1, 2 in the example) into some remaining empty cells. Each row, column and outlined 3×3 square (3×2 rectangle in the example) must contain every digit exactly once. Then using these digits solve a slitherlink puzzle - draw a single closed loop along the grid lines that does not touch or cross itself at any point. Digits show how many of a cell's edges form part of the loop. The loop cannot separate any tree from its tent. **You need only mark in the slitherlink loop correctly to receive full credit.**



10. Double Block

200 points

Rules: In each row and column, shade in exactly two cells and fill the remaining cells with each of the digits 1-n, where n is two less than the grid size. The numbers on the outside of the puzzle give the sum of the numbers between the two shaded cells in that particular row or column.



Round 11: Not Quite Classics

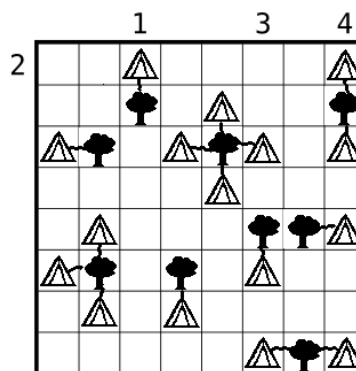
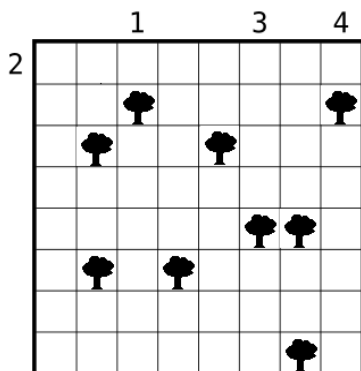
Friday 15th August 2014, 14:15 - 15:15

60 minutes - 1200 points

1. Family Tents

40 points

Rules: Draw tents in some cells that share an edge with a tree. Tents can only attach to a tree across an edge, not diagonally. Tents attached to different trees cannot touch each other, not even diagonally. Numbers on some rows and columns reveal the number of tents in that row or column. There must be at least one tree with 4 tents attached, at least one tree with 3 tents attached, at least one tree with 2 tents attached, and at least one tree with 1 tent attached. All trees must have at least one tent attached.

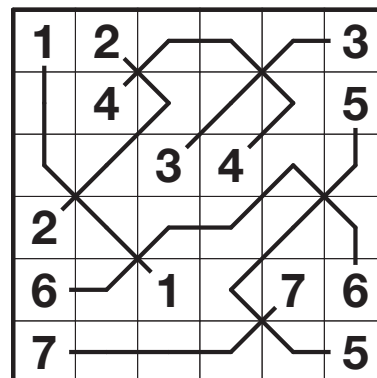


2 - 3. Diagonal Numberlink

40, 40 points

Rules: Draw a series of separate paths, each connecting a pair of identical numbers. Paths are drawn by joining neighbouring cell centres, including diagonally neighbouring cells. No more than one path can enter any cell, but paths can cross on the corner intersection point of four touching cells.

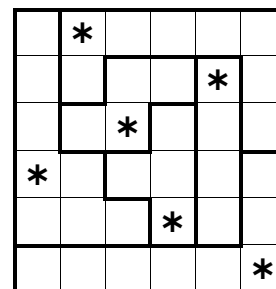
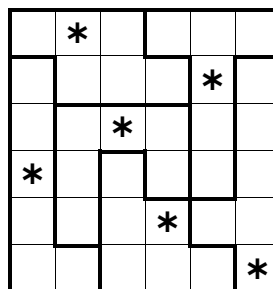
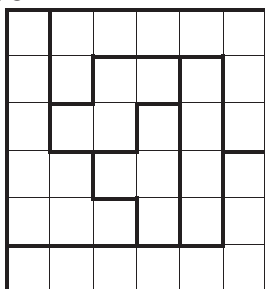
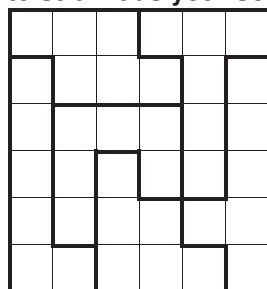
1	2				3
	4				5
		3	4		
2					
6		1		7	6
7					5



4. Star Battle Twins

50 points

Rules: Place stars in some cells so that each row, column and outlined region has exactly 2 stars (1 star in the example). Cells containing stars cannot touch each other, not even diagonally. The pattern of stars in the 2 grids is identical. It is not necessary to complete both grids correctly to earn full marks, but if you do not complete both then you must circle or clearly indicate the grid which you wish to submit as your solution.



5 - 6. Cross Math

50, 50 points

Rules: Place the digits 1-9 once each in the blank cells so that six valid equations can be formed by replacing each starburst symbol with one of the standard mathematical operators: +, -, x or /. The implied operators are applied from left to right or from top to bottom, ignoring rules of mathematical precedence, and do not need to be drawn in.

	☼		☼		=	14
☼	■	☼	■	☼	■	■
	☼		☼		=	85
☼	■	☼	■	☼	■	■
	☼		☼		=	9
=	■	=	■	=	■	■
57	■	12	■	70	■	■

6	☼	1	☼	7	=	14
☼	■	☼	■	☼	■	■
9	☼	8	☼	5	=	85
☼	■	☼	■	☼	■	■
3	☼	4	☼	2	=	9
=	■	=	■	=	■	■
57	■	12	■	70	■	■

7 - 8. Tetromino Sums

50, 100 points

Rules: Place the digit range given at the top-right of the puzzle into the grid such that digits do not repeat in rows or columns. Numbers outside the grid denote, in order, the sums of groups of adjacent digits in the corresponding row or column. Cells unoccupied by digits form the set of tetrominos shown alongside the puzzle. Tetrominos cannot touch each other, even at a corner. Reflections and rotations of tetrominos are allowed.

5 4 1
6 2 6 11 2 5 3
2 8 6 10 14 3 11

18 3
2
21
9 2
21
12
2 9

Range:
1-6

5 4 1
6 2 6 11 2 5 3
2 8 6 10 14 3 11

18 3
2
21
9 2
21
12
2 9

5	2	4	6	1	3
■	■	■	2	■	■
1	6	3	2	5	4
6	3	■	■	■	2
4	2	1	6	3	5
3	4	5	■	■	■
2	1	5	3	■	■

9 - 10. Tapa Mystery

60, 80 points

Rules: 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. Clues are given in no particular order. Shaded cells cannot form a 2×2 square or larger. There are no wall segments on cells containing numbers. Some numbers are replaced by question marks. A question mark never replaces a zero.

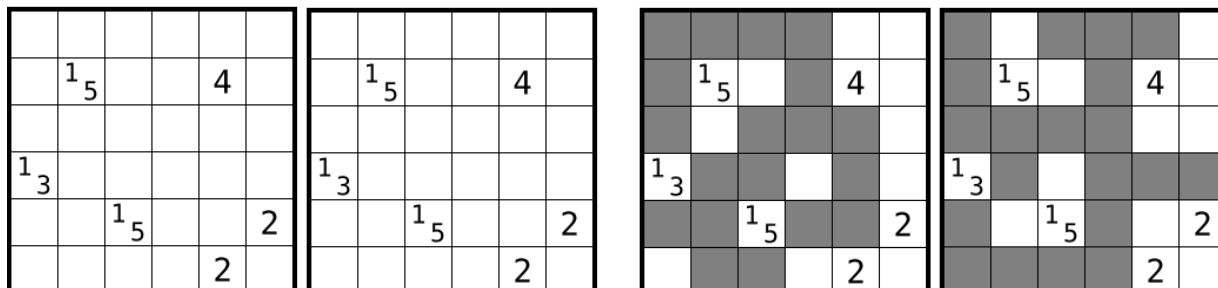
3								
		?		?				
		1 ₁ 1 ₁			1 ₁ 1 ₁		1 ₁ 1 ₁	
1 ₁ 1 ₁				1 ₁ 1 ₁	3 ₃		? ?	
				1 ₁ 1 ₁			1 ₁ 1 ₁	
		1 ₃			?			

3								
		?		?				
		1 ₁ 1 ₁			1 ₁ 1 ₁		1 ₁ 1 ₁	
1 ₁ 1 ₁				1 ₁ 1 ₁	3 ₃		? ?	
				1 ₁ 1 ₁			1 ₁ 1 ₁	
		1 ₃			?			

11. Twopa

70 points

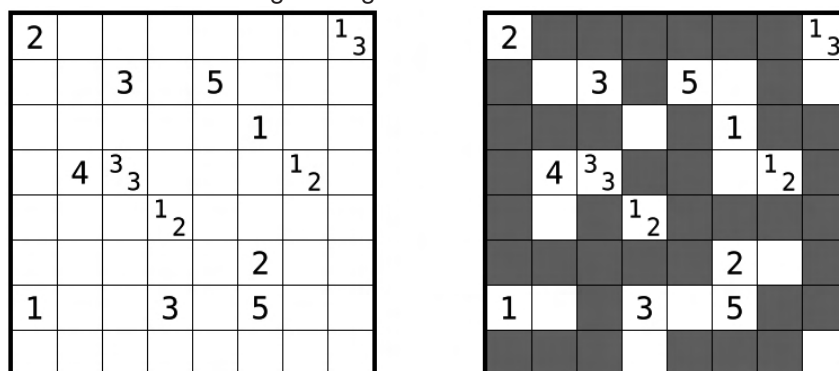
Rules: Shade some cells to create a continuous wall. Numbers in a cell indicate the length of shaded cell blocks in its neighbouring cells. If there is more than one number in a cell there must be at least one unshaded cell between the shaded cell blocks. Shaded cells cannot form a 2×2 square or larger. There are no wall segments on cells containing numbers. The given Tapa has several solutions, but find the unique pair of solutions such that the shaded cells round each clue number are not identical for any pair of corresponding clues.



12. Total-False Tapa

80 points

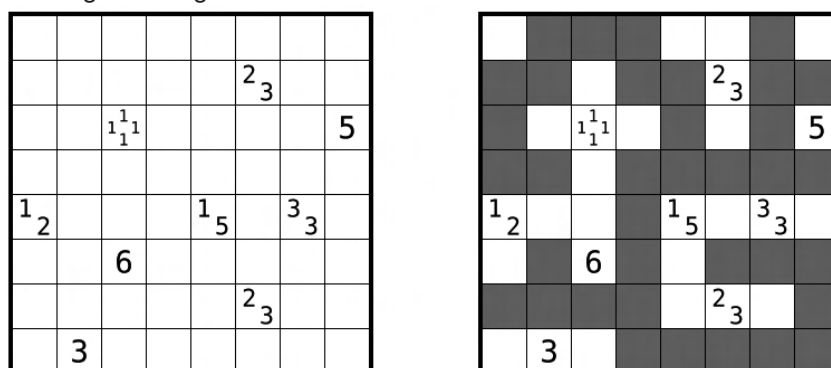
Rules: Shade some cells to create a continuous wall. Numbers in a cell indicate the length of shaded cell blocks in its neighbouring cells. If there is more than one number in a cell there must be at least one unshaded cell between the shaded cell blocks. Shaded cells cannot form a 2×2 square or larger. There are no wall segments on cells containing numbers. Additionally, all given clues are wrong. This means that the correct number of digits in that cell is different from the given number of digits, and that all digits have to be different from the given digits in that cell. Correct clues cannot contain zero.



13. No-Islands Tapa

130 points

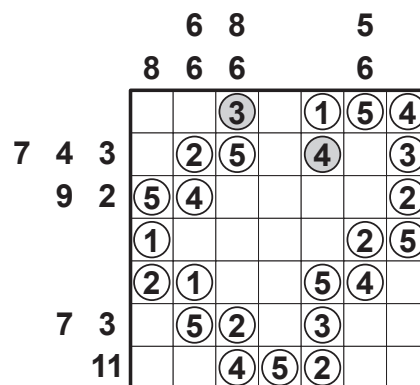
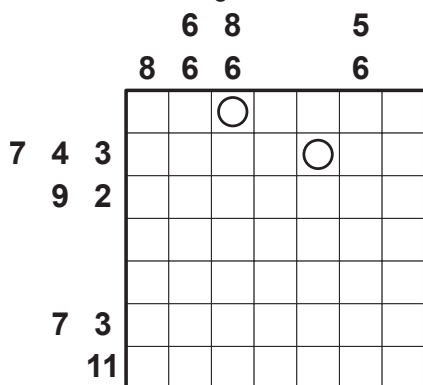
Rules: Shade some cells to create a continuous wall. Numbers in a cell indicate the length of shaded cell blocks in its neighbouring cells. If there is more than one number in a cell there must be at least one unshaded cell between the shaded cell blocks. Shaded cells cannot form a 2×2 square or larger.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



14. Sum Snake

110 points

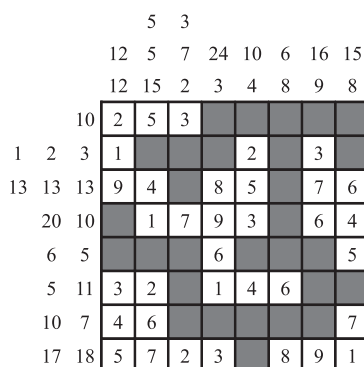
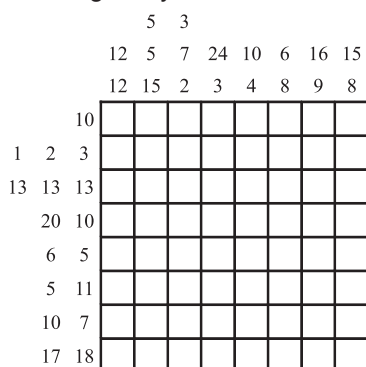
Rules: Draw a snake of digits in the grid, using digits 1-7 (1-5 in the example). A snake is a continuous path of cells that travels horizontally or vertically without touching itself, not even diagonally. The clues outside the grid represent the sums of all the different digit groups in the corresponding row or column, in order. If there is more than one number in a clue, there must be at least one empty cell between the digit groups. No digit may be repeated within a row or column. The head and tail of the snake are given with circles. All digits must be on the snake.



15. Japanese Coral

120 points

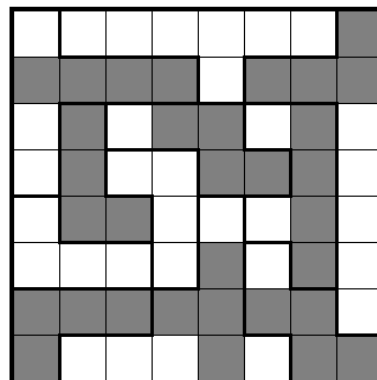
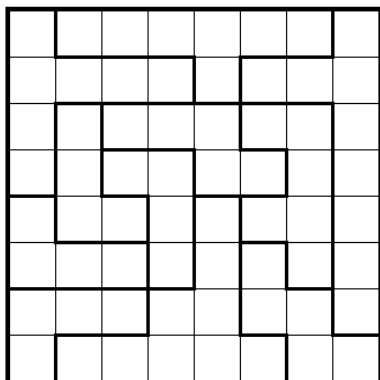
Rules: Shade some cells and place 1 to 9 into all other cells, such that no number appears more than once in any row or column. The external numbers list all single digits and sums of consecutive digits in that row or column, in the order encountered. Additionally, all shaded cells form a coral, which means that they are connected horizontally or vertically and contain no 2×2 shaded areas. The coral can't touch itself, not even diagonally.



16. LITS+

130 points

Rules: Shade some cells, such that shaded cells within a bold-lined area, if any, form a single tetromino (L, I, T or S). All shaded cells must be connected orthogonally, and there may be no 2×2 square of cells consisting entirely of shaded or unshaded cells. No two of the same type of tetromino may touch along an edge, irrespective of rotation or reflection. Note that these rules allow bold-lined regions to not contain any shaded cells.



Round 12: Something Different

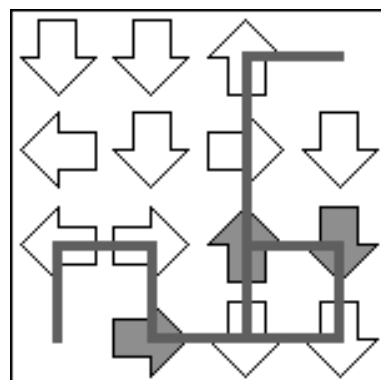
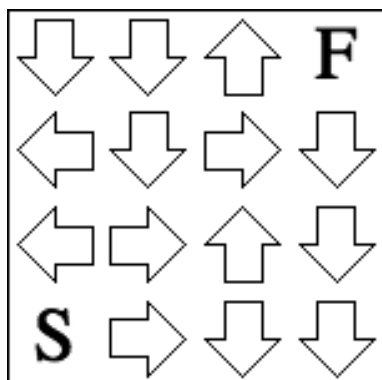
Friday 15th August 2014, 15:30 - 16:30

60 minutes - 1200 points

1 - 2. Every Third One

30, 40 points

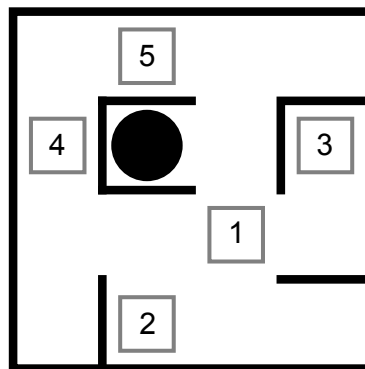
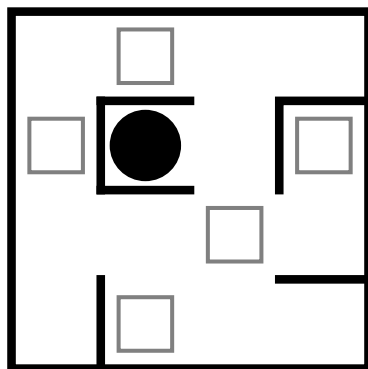
Rules: Find a path from Start to Finish that moves horizontally and vertically. Every third arrow along the path indicates the correct direction of the next step; all other arrows do not. The path may revisit arrows multiple times, but may not revisit the Start or make a U-turn. It is not necessary to clarify any paths which are followed multiple times.



3. Tilt Maze

40 points

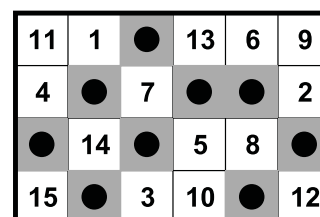
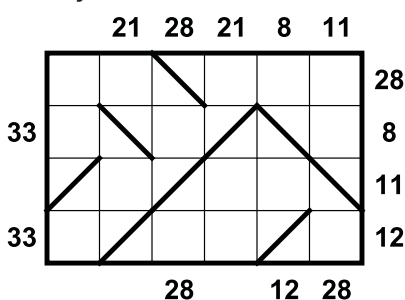
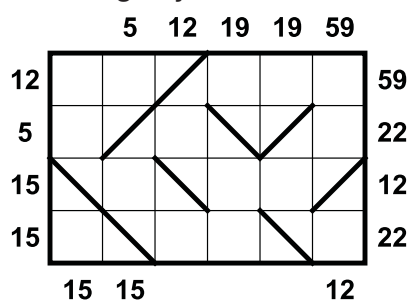
Rules: Visit all the square targets by rolling the black ball around the grid. The ball can only be rolled left, right, up or down, but not diagonally. The black ball always rolls in a straight line until it hits a wall. What is the correct sequence of target visits that allows all targets to be visited? Label them in increasing numeric order, writing "1" on the first target visited and so on. Targets can be visited more than once, but you should only number them the first time you visit them.



4. Flip Mirror Sums

140 points

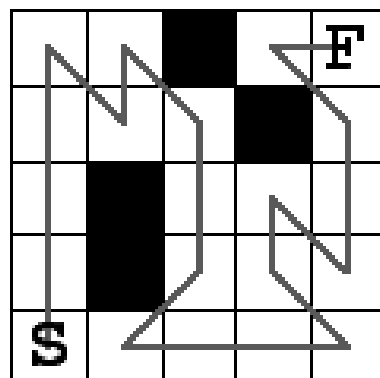
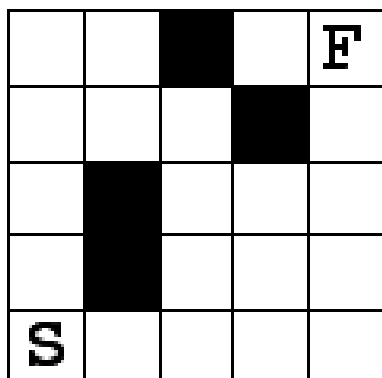
Rules: Place the numbers 1 to 13 (1 to 15 in the example) once each into the empty cells, in the same location in each grid. Tracing a path through either grid from each exterior number must result in the given value when summing all visited cells. If a cell is visited more than once then it is added on as many times as it is visited. Paths turn 90 degrees on contact with a mirror. Each mirror is flipped in orientation in the other grid. **The two grids must match to receive credit, or if you prefer you can circle the grid you wish to have taken as your solution.**



5 - 6. That's Not Right

30, 50 points

Rules: Find a path moving horizontally, vertically, and diagonally that starts in the lower left and finishes in the upper right. The path should pass through each white cell exactly once, should not pass through any black cells, and should never make a right angle. The path can cross itself - right angles may in this case be formed by the crossing lines but the path itself may still not make a right angle.



7 - 8. Chaos

70, 80 points

Rules: Fill in the grid with the digits 1, 2, 3 and 4. There cannot be a continuous row of three identical digits vertically, horizontally or diagonally. Identical digits cannot be a chess knight's move apart. A chess knight moves two cells horizontally or vertically and then one cell in a perpendicular direction.

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

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

9. Toroidal Numberlink

80 points

Rules: Draw a series of separate paths, each connecting a pair of identical numbers. Paths are drawn by joining neighbouring cell centres, not including diagonally neighbouring cells. No more than one path can enter any cell. Paths can travel off one end of a row or column and re-enter at the opposite end of the same row or column, respectively.

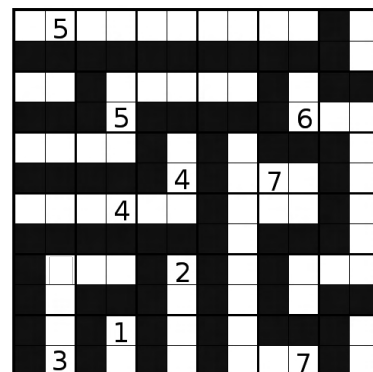
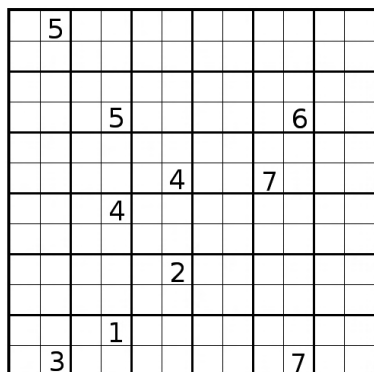
		1		
2	1	2	3	4
3				
4				

		1		
2	1	2	3	4
3				
4				

10. Mini Coral

80 points

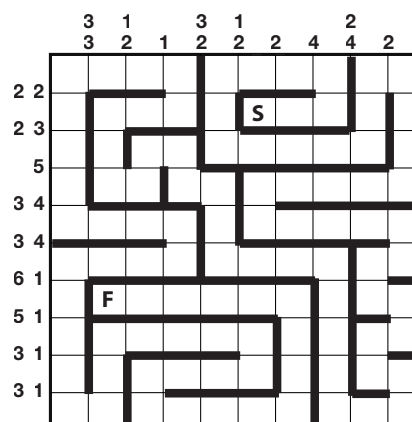
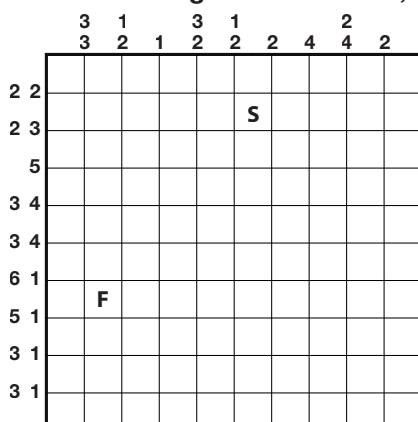
Rules: Shade two orthogonally touching cells in every bold-lined group of four. All shaded cells in the entire grid must be connected orthogonally. There must be no 2×2 squares of shaded cells. All unshaded cells must be connected to the edge of the grid, where cells are considered to be connected if they touch orthogonally. In some bold-lined groups there is a number; numbers may not be shaded and indicate the total count of all connected unshaded bold-lined areas. There may be some areas without any number, and some areas may have more than one number.



11. Labyrinth

90 points

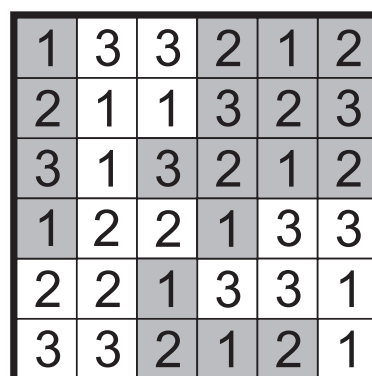
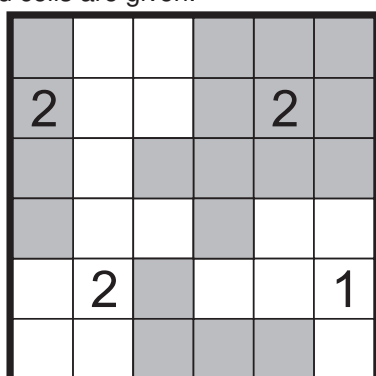
Rules: Create a labyrinth in the grid. The clues outside the grid identify how many consecutive segments of grid lines are to be marked as borders in that row or column. Multiple clues represent multiple borders, given in the order encountered. There is a gap of at least one segment between adjacent borders on a line. When the labyrinth is complete there should be a route from start (S) to finish (F) which passes through each cell exactly once. The route is one-cell wide at all points, and moves between cell centres in a horizontal or vertical direction only. **To receive credit you must fully draw in one or both of the following: all maze walls, or the complete solution path to the maze.**



12. Neighbours

100 points

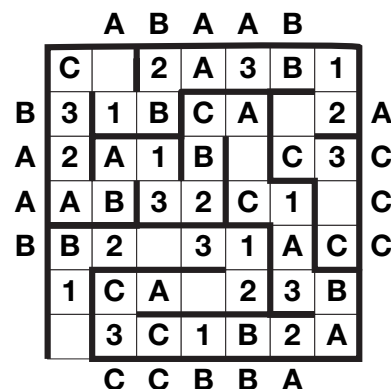
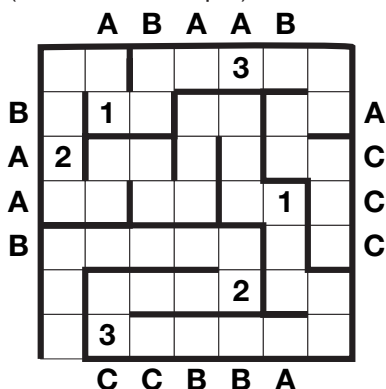
Rules: Place digits 1-3 in the grid so that in each row and column, each digit appears three times (twice in the example). Numbers in shaded cells do not share an edge with a cell containing the same number. Numbers in unshaded cells share an edge with at least one cell containing the same number. All shaded cells are given.



13. Easy as Magicmaze

100 points

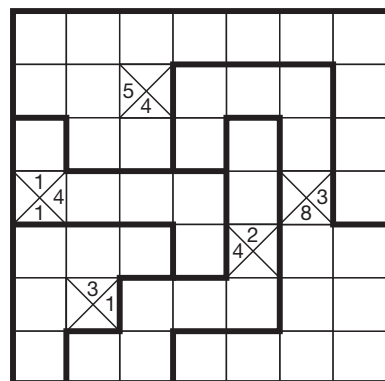
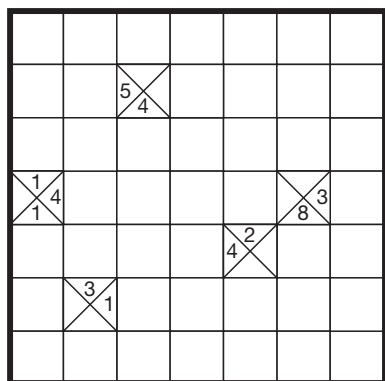
Rules: Enter the letters from 'A' to 'C' into the grid, so that in every row and every column each letter occurs exactly once. Border letters indicate the first letter found in the corresponding row or column, ignoring any numbers. Also enter the digits 1-3 into the grid, so that each digit appears exactly once in every row and column. Following the path through the grid, starting from the outside, the digits 1, 2 and 3 must be repeatedly encountered in that order, ignoring any letters, i.e. 1, 2, 3, 1, 2, 3, 1, etc. Each cell may contain either a letter or a number, but not both. Each row and column will have two empty cells (one in the example).



14. Compass

120 points

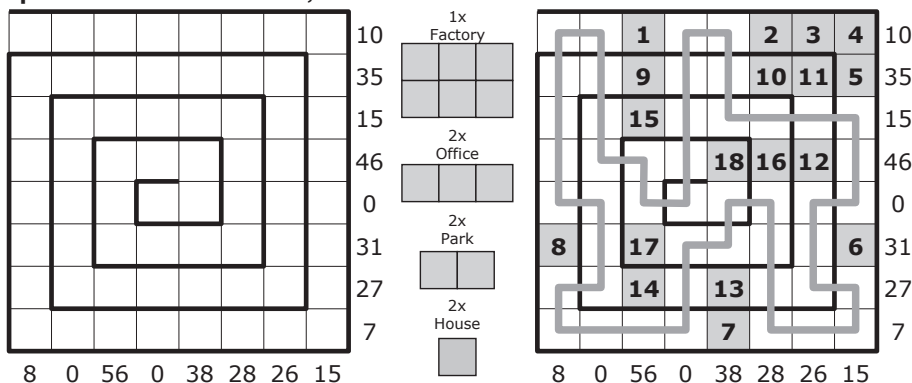
Rules: Split the grid into orthogonally connected regions, one for each clue. Some cells contain clues, and these cells cannot form part of any region. A number at the top of a clue cell must equal the number of cells within the region that lies immediately above the clue, regardless of the horizontal position of those cells. The other numbers work in the same way for cells to the right, below and left of the clue.



15. Spiral City Construction

150 points

Rules: Place all buildings in the grid. Buildings may be rotated and reflected. They can not touch each other, not even diagonally. All unused cells form a single loop. The given grid is a spiral. Building segments are numbered from 1 to 32 (1 to 18 in the example), starting from the entrance of the spiral at the top left and moving towards the centre. The clues outside the grid give the sum of the building segments in the corresponding row or column. **You must either write in all numbers or draw the complete loop to be marked correct, or both.**



Round 13: Afternoon Tea

Friday 15th August 2014, 16:45 - 17:30

45 minutes - 670 points

1. T Sets

100 points

Rules: Each cell contains a digit from 1-9. Identify 5 sets of 5 consecutive digits within the grid, so that each set consists of a different consecutive group, and each set is enclosed within a "T" whose outline follows the grid lines. "T"s cannot touch, not even diagonally.

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

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

2. T Rooms

80 points

Rules: Each grid cell represents a room. Dividing walls are to be placed in the grid such that all clue numbers represent the number of rooms which can be seen in any of the four directions from that location, not counting the room the clue number is in. Dividing walls must be formed exclusively of "T"s which must lie along the grid lines and must not touch each other even at a corner. No part of a "T" may lie along the outer perimeter of the grid: nor may a "T" touch the perimeter at more than one point. "T"s are all the same size, with both a length and a width of two cells.

2				5
	3		2	
		4		
	4		3	
5				5

2				5
	3		2	
		4		
	4		3	
5				5

3 - 4. T for Tapa

70, 140 points

Rules: Shade some cells to create a continuous wall, such that the wall is made up exclusively of non-overlapping "T"s. 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 2×2 square or larger. There are no wall segments on cells containing numbers. "Ts" are all the same size, each covering 5 cells in total (as in the example).

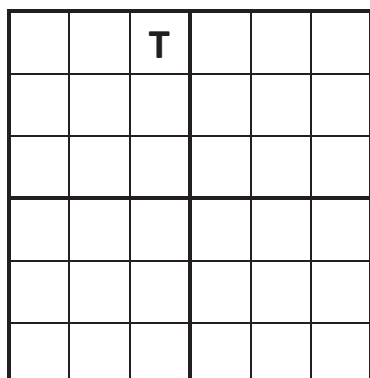
		2				
					3	
			8			
	5					
				8		

		2				
					3	
			8			
	5					
				8		

5. T for Trees

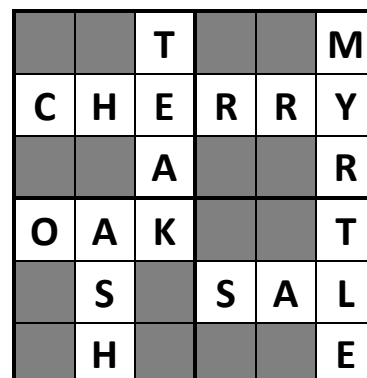
90 points

Rules: Place the given list of trees into the grid to form an interlocking crossword, so only the words in the list are formed and no others. Within each bold-lined 3×3 square, the cells occupied by letters must form a "T" in any one of 4 possible orientations. One letter is already placed, and all words must be used. It is not necessary to shade unused cells.



6 CHERRY
MYRTLE
4 TEAK

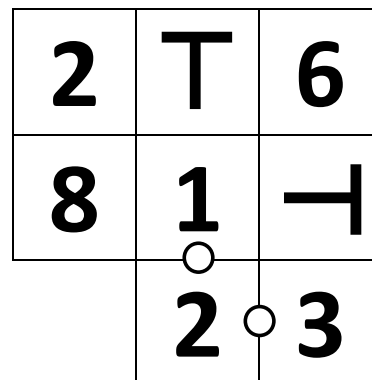
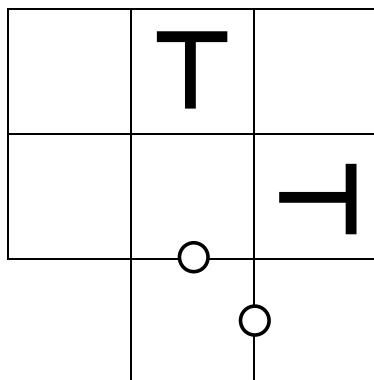
3 ASH
OAK
SAL



6 - 8. T for Times Tables

50, 60, 80 points

Rules: Fill each empty cell with a digit between 0 and 9. Identical digits cannot occupy orthogonally neighbouring cells. Wherever orthogonally neighbouring cells contain consecutive digits, this is indicated by a white circle between the cells. For each "T" in the grid, the 2-digit number reading down the stem of the "T" must be equal to the product of the two single-digit numbers on the arms of the "T". The 2-digit number is not allowed to start with a zero.



Round 14: TEAM: Doppelgangers

Friday 15th August 2014, 17:45 - 18:45

60 minutes - 3600 points

Each puzzle in this round consists of a number of pieces that must be assembled into a 10×10 grid. Each grid is then used to solve two distinct puzzles, in the same arrangement for both. All puzzles except for puzzle 1 have a fixed orientation for each piece, given either via digits in some cells or via grey arrows - these grey arrows have no solving purpose beyond providing an orientation for the piece; all arrows should face in the same direction in a correctly assembled puzzle. There are 6 different grids to be assembled and therefore 12 puzzles to be solved. One set of pieces will be provided for each grid, along with a number of empty printed grids for you to copy the grid onto and in which to solve the puzzles. Pieces will be colour-coded to make it easier to keep track of which piece belongs to which puzzle. **Credit will only be given for a solved puzzle if the grid was correctly assembled** - there is one unique assembly of each grid which will give a solution for both puzzles.

Puzzle 1: LITS (240 points) *and* Star Battle (240 points)

Puzzle 2: Cave (420 points) *and* Fillomino (300 points)

Puzzle 3: Minesweeper (120 points) *and* Four Winds (180 points)

Puzzle 4: Masyu (330 points) *and* Yin Yang (270 points)

Puzzle 5: Nurikabe (330 points) *and* Numberlink (270 points)

Puzzle 6: Shikaku (220 points) *and* Cave (680 points)

LITS: Shade four cells in each bold-lined region to form a single tetromino (L, I, T or S). All shaded cells are connected orthogonally, and there is no 2×2 square of cells consisting entirely of shaded cells. No two of the same kind of tetromino may touch along an edge, irrespective of rotation or reflection.

Star Battle: Place stars in some cells so that each row, column and outlined region has exactly 2 stars. Cells containing stars cannot touch each other, not even diagonally.

Cave: Form a cave of orthogonally connected cells so that each given number is inside the cave. Each given number indicates the number of visible cave cells, both horizontally or vertically, including the numbered cell itself. All cells outside the cave must be connected orthogonally to the edge of the grid.

Fillomino: Fill each empty cell with a number such that each number in the grid is part of a continuous region of that many cells. A region is continuous whenever two cells touch orthogonally. Two different regions made up of the same number of cells cannot touch orthogonally.

Minesweeper: Place mines into some empty cells in the grid. Clues in cells show the number of mines in touching cells, including diagonally. Only one mine may be placed per cell. The number of mines is unknown.

Four Winds: Draw lines in any orthogonal direction from the given numbers so that each given number represents the number of connected cells. Each empty cell is connected to exactly one of the given numbers. Lines cannot cross.

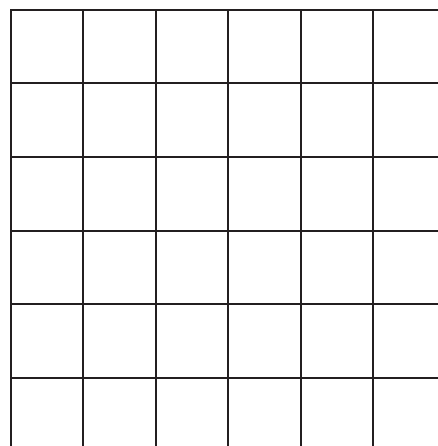
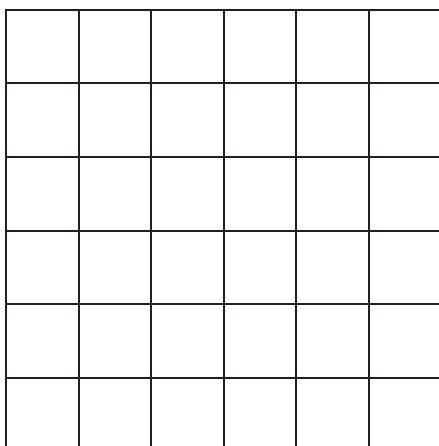
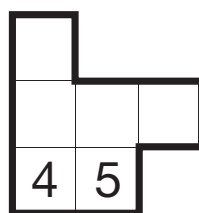
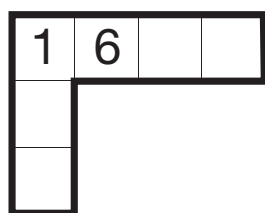
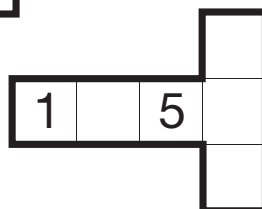
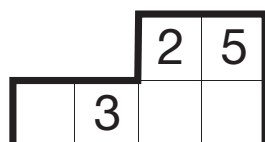
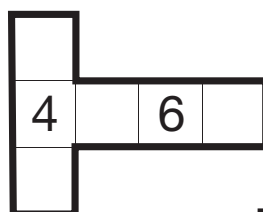
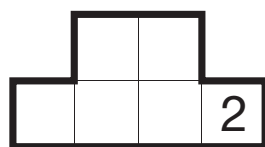
Masyu: Draw a single loop using only horizontal and vertical lines between the centres of some cells such that the loop does not visit any cell more than once. At every cell containing a white circle the loop must pass straight through that circle and make a 90 degree turn in at least one of the cells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

Numberlink: Draw a series of separate paths, each connecting a pair of identical numbers. No more than one line can enter any cell, and lines can only travel horizontally or vertically between cell centres.

Shikaku: Draw solid lines along some of the dashed lines in order to divide the grid up into a set of rectangles, such that every number is inside exactly one rectangle. The number inside each rectangle must be exactly equal to the number of grid cells that the rectangle contains. All grid cells are used.

Jigsaw Sudoku (example only): Place 1 to 6 into every row, column and jigsaw piece.

Example: Fillomino and Jigsaw Sudoku:



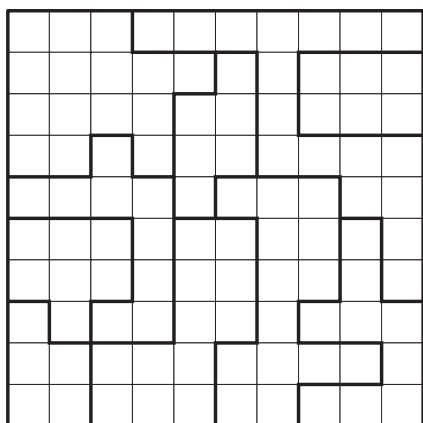
Jigsaw Sudoku

1	6	3	4	2	5
5	2	4	3	6	1
2	4	5	6	1	3
6	3	1	2	5	4
3	1	2	5	4	6
4	5	6	1	3	2

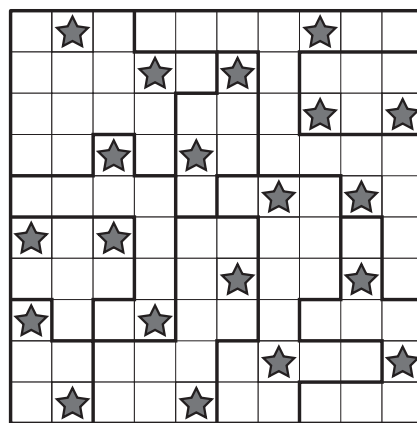
Fillomino

1	6	6	2	2	5
4	4	6	3	3	5
4	4	6	6	3	5
2	2	1	6	5	5
4	4	4	5	1	2
4	5	5	5	5	2

This page contains example puzzle and solutions for those types not described elsewhere in this instruction booklet.



Star Battle



			3	2			2
	7						
	6					9	
	7	3				10	4
5	6				8	12	
	6					9	
						9	
5			6	5			

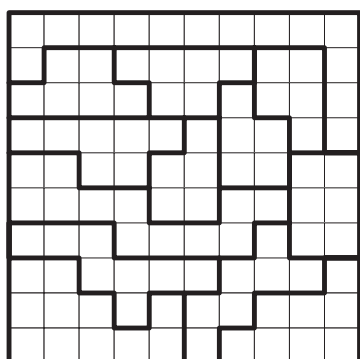
Cave

			3	2			2
	7						
	6					9	
	7	3				10	4
5	6				8	12	
	6					9	
						9	
5			6	5			

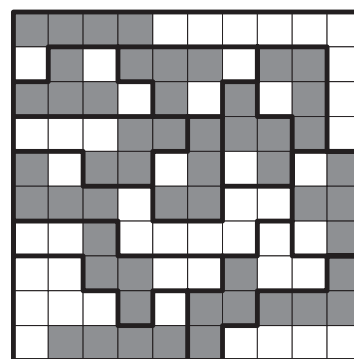
1			0				
1			1			0	
	0						0
		0	3			0	
	3		3				
	5				3		1
						2	
	3	2	2	2		2	

Minesweeper

1	●		0				
1			1			0	
	0			●			0
		0	3	●		0	
●	3		3	●			
●	5	●			3		1
	●	●		●	●	2	●
●	3	2	2	2		2	



LITS



	4						
			6				
		1				4	
6							
	2					4	
		7					

Four Winds

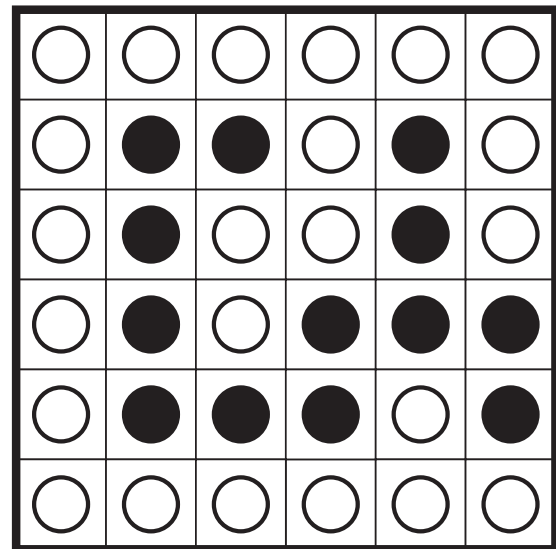
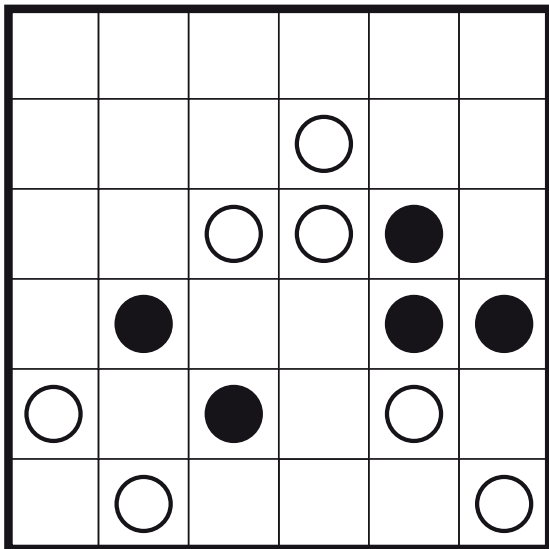
	4						
			6				
		1				4	
6							
	2					4	
		7					

Additional Puzzle Instructions for WPC Round 14: Doppelgangers

Yin Yang instructions were omitted from the instruction booklet. They are as follows:

Yin Yang

Place either a black circle or a white circle into every grid cell, such that all of the cells containing white circles are connected orthogonally into a single continuous region, and such that all of the cells containing black circles are connected orthogonally into a single continuous region. There must not be any 2×2 blocks of cells which contain either all white circles or all black circles.



Round 15: TEAM: Square Bashing

Saturday 16th August 2014, 09:30 - 10:00 and 10:15 - 10:45

30+30 minutes - 4600 points

Square Bashing

Rules: Nothing may be brought into the competition hall for this round except for drinks or medical essentials. In particular no stationery, including pens or pencils, of any kind is allowed. **Any team breaching this rule will score zero points for the entire round.** This team round consists of three phases. The first two phases take place in one session, and the third and final phase takes place in a second session, with a break before it.

In the first phase, which covers puzzles 1-4, each team will be seated at a table and will be asked to solve 4 separate paper puzzles. They will solve these by placing an allocated supply of coloured stickers on the paper. A limited number of white stickers will be provided to correct mistakes. Once the team is satisfied they have solved all 4 puzzles correctly, they must surrender their solutions to an invigilator. The invigilator will not check the puzzles but will immediately provide 3 further puzzles and a set of 4 identical semi-transparent coloured counters for phase 2. Teams will have no further opportunity to correct any mistakes after submission, but they may submit incomplete or incorrect puzzles if they wish.

In phase 2, which covers puzzles 5-7, the players move counters according to given rules in a series of steps. When the team are satisfied they have found the final position of each counter, they should mark the locations with the given stickers. Once they have marked the final positions of each counter on all 3 puzzles, they should raise their hands and call 'finished' to alert an invigilator. The invigilator will collect their 3 papers and make a note of their finish time.

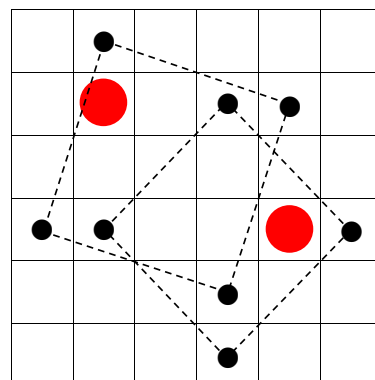
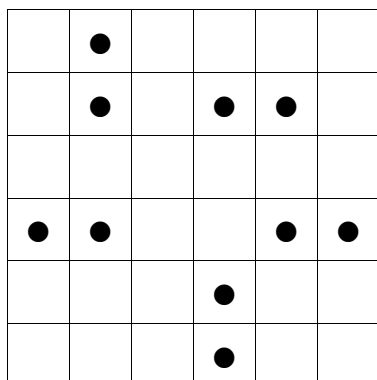
Bonus points will be awarded for teams who finish all 7 puzzles correctly in the allotted time, as per the other team rounds. In addition, the first 8 A-teams to submit a correct set of solutions for both of the first two phases will qualify for the third and final phase. B-teams and UN teams cannot qualify for the final phase. The final phase is a play-off for the A-teams that finished both correctly and in the eight fastest times for the first and second phases combined. Due to the physical space required for this phase, which is designed as a spectator activity for the non-playing teams, the teams who finished in 5th-8th position will play first. The top four teams (who will not be allowed to view teams 5-8 playing) will play immediately afterwards. Times will be directly compared across all 8 teams to produce a ranking position for each of the 8 teams. Teams that successfully complete the final round will be awarded further bonus points according to their ranking position: 1st=2800 points, 2nd=2000 points, 3rd=1400 points, 4th=1000 points, 5th=700 points, 6th=500 points, 7th=350 points, 8th=250 points.

In the final phase, the team players will themselves act as counters moving around a large grid on the floor, with each player playing the role of one of the four counters. Each team will have their own separate identical grid to solve, and the rules will otherwise be the same as for puzzles 5-7. When a team believes they have successfully completed a step and are all standing on the correct square to complete that step, all players should raise their hands so it is clear to the judges for adjudication. They can continue immediately. If a team submits a step with an error then this will end their participation in this phase and they will receive 0 bonus points for the third phase. If any player has any mobility issues that may affect their play, this will be dealt with on a case-by-case basis on the day by the tournament director.

1. Hidden Squares

100 points

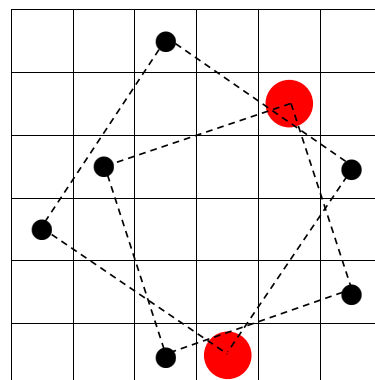
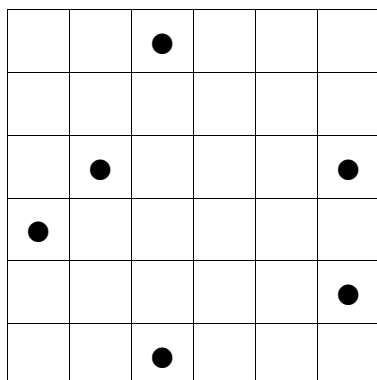
Rules: There are 4 hidden squares in the grid and no extra hidden squares which do not form part of the solution. The 4 corners of each hidden square are marked by a dot. No two hidden squares share a corner. There are 4 additional dots in the grid which do not lie on the corner of any hidden square - these dots must be covered with stickers. In the example there are 2 hidden squares and 2 extra dots to mark.



2. Incomplete Squares

100 points

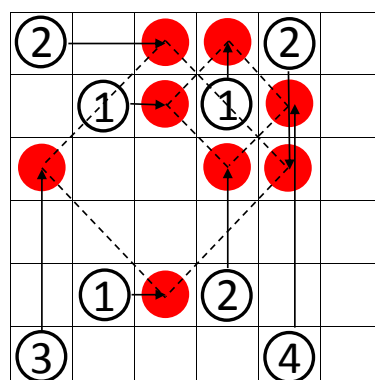
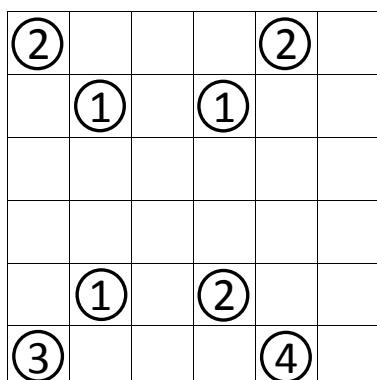
Rules: When the puzzle is correctly completed there will be 4 hidden squares in the grid and the 4 corners of each hidden square will be marked by a dot or sticker. No two hidden squares can share a corner. Initially, 3 dots for each hidden square are given. The missing corners must be added with stickers. There are no extra hidden squares which do not form part of the solution which can be formed by adding a sticker. In the example there are 2 hidden squares and 2 corners to mark.



3. Hamle Squares

200 points

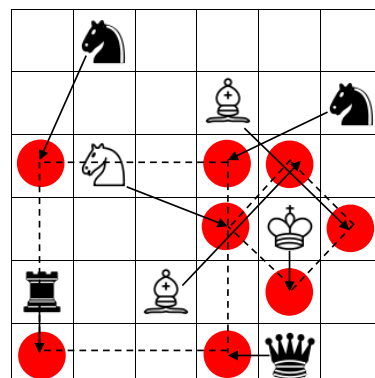
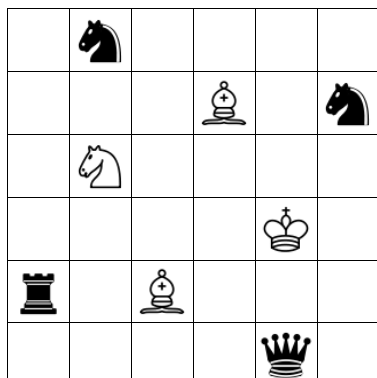
Rules: The 8 circles in the grid represent counters. 8 stickers must be placed in the centre of 8 different blank cells in the grid, to represent the new position of each counter after a single move of a distance exactly equal to the number shown on the counter along either the counter's row or column. The 8 stickers must lie at the corners of 2 hidden squares. The movement of counters is not impeded by other counters or stickers in intervening cells.



4. Chess Squares

500 points

Rules: There are 8 chess pieces in the grid. The 4 black pieces lie at the corners of a square and the 4 white pieces also lie at the corners of a square. Solvers must place 8 stickers in the centre of 8 different blank cells in the grid to represent the new position of each chess piece after a single move, following the normal rules of chess. The 4 stickers that represent the new positions of the 4 black pieces must lie at the corners of a hidden square, and the 4 stickers that represent the new positions of the 4 white pieces must lie at the corners of another hidden square. The movement of chess pieces is not impeded by other pieces in intervening cells.



5 - 8. Counter Games

200, 300, 400, 2800 points

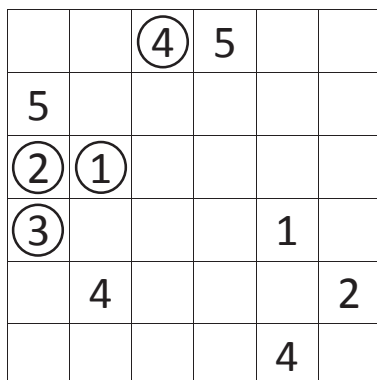
Rules: These games are played with 4 counters on a grid in which some cells contain a number. A series of puzzles must be solved by moving the counters according to certain rules. There are two sets of rules and these are applied alternately within the series of puzzles.

The first 4 starting cells are circled. Rules A and B are then applied alternately. After each mini-puzzle is solved, the finishing cells become the starting cells for the next mini-puzzle. Any cell, including the circled cells, can be part of the solution to more than one mini-puzzle.

Puzzle Rule A: Each counter starts on a numbered cell and must be moved in one of the 4 main directions by a distance equal to the number in its starting cell. When the 4 counters have been moved correctly, each one must finish in an unnumbered cell and the centres of these 4 cells must lie at the corners of a square.

Puzzle Rule B: Each counter starts on an unnumbered cell and must make a knight's move to a numbered cell. When the 4 counters have been moved correctly, the 4 numbers in these cells must all be different in value and must also add to a prescribed total.

The sequence of squares and totals to be formed will be printed alongside the relevant grid, or in the case of the final round shown on a poster. In all cases, the starting cells will be circled and will contain the numbers 1-4, hence satisfying the initial starting total of 10.



Target	Step
10	1
□	2
12	3
□	4

