



Puzzle Cruise / 2nd-3rd July 2011
UK Puzzle Association
Instructions Booklet

<http://www.ukpuzzles.org/contests.php?contestid=8>



Anchors Aweigh!

Welcome aboard the perplexing Puzzle Cruise! The national puzzle test for the United States are being held in a few weeks, so what perfect time to explore the puzzling seven seas and get your toes wet before the real exam?

Puzzle Cruise is designed to be a simulation of a typical USPC test, which means you can be sure to expect a splashing variety of puzzles ranging from logic to visual. There will be 20 puzzles and you will have 2 and a half hours to fish out as many correct answers as you can.

Each puzzle is worth a certain amount of points if you get it right – but attempting one and getting it wrong will cost you 5 points. The maximum score for Puzzle Cruise is 300 points, but who's counting? Have a pleasant journey.

Bon Voyage!

Acknowledgments

Many thanks go to the UKPA for hosting the test; Alan O'Donnell, Nick Deller and Liane Robinson for test solving, and the following people for their several puzzle ideas; "Bermuda Triangle" from Serkan Yurekli's Trid, "Pearls" from the 2001 World Puzzle Championship, "Lifesavers" from Gyorgy Istvan's Square Route, "Weird Calculator" from Erich Friedman, "Loch Ness Monster" from Nikola Zivanovic's Arrow Snake, "Ship Sudoku" from Thomas Snyder, "Consecutive Loop" from Serkan Yurekli, "Pentomino Pool" from Rudi Mrazovic and Zrinka Kokot, "KakurOH!" from Michael Rios and "Man Overboard" from Dave Tuller's Wolves and Sheep in Fences.

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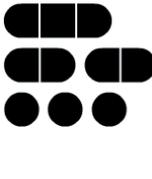


1. Battleships - 5 points

Locate the 10-ship fleet in the grid. Ships do not touch each other, not even diagonally. Numbers outside the grid indicate the number of ship parts in that row or column. Example shows a 6-ship fleet.

Answer Format: Enter the 4 co-ordinates of the four 1-unit submarines from top-bottom and left-right.

	A	B	C	D	E	F	
1		●			●		2
2		●					1
3						●	1
4		●	■	●			3
5						●	1
6	●	●					2
	1	4	1	1	1	2	



Example:
(E1, F3, F5)

2. Sudoku - 10 points

Fill in the grid with numbers from 1-9 so that each column, row and bolded regions contain all digits from 1 to 9.

Answer Format: Enter the content of the marked row, followed by the marked column.

3. Anglers - 5 points

Numbers outside the grid represent the length of a fisherman's rod at that position. Each fisherman gets his own fish. Rods can travel horizontally and vertically and they cannot be entangled. All cells are used at the end.

Answer Format: Write the content of the marked row using the given notation.

8

			🐟		
		🐟			
		🐟			
		🐟			

6

→

8

			🐟		
		🐟			
		🐟			
		🐟			

6

1	2	3	4
5	6	F	

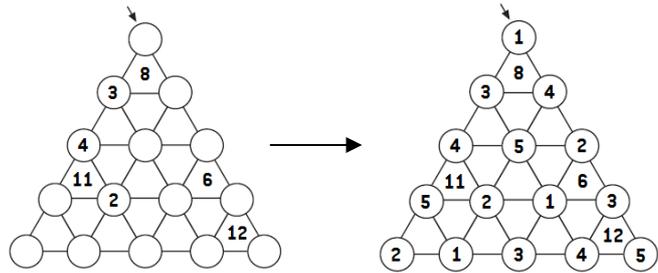
Example:
(62F24)



4. Bermuda Triangle - 10 points

Insert numbers 1-6 into the circles so that no numbers repeat along any straight line. Numbers inside a triangle represents the sum of its vertices.

Answer Format: Write the content of the marked line.



*Example:
14235*

5. Count Me In - 5 points

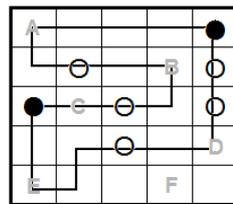
Count the number of triangles, of any size, that appear in this figure.

Answer Format: Write the number of triangles.

6. Masyu - 10 points

Draw a closed loop inside the grid that passes through all circled cells by joining centres of adjacent squares. White circles must be passed straight through and the loop must turn in the previous and/or next cell in its path. Black circles must be turned upon and the loop must travel straight through the previous and the next cell in its path.

Answer Format: Starting from the top-left corner and going clockwise, write the letters visited in chronological order. Some letters may be unvisited. If 'A' is unvisited, start with the next square to the right.

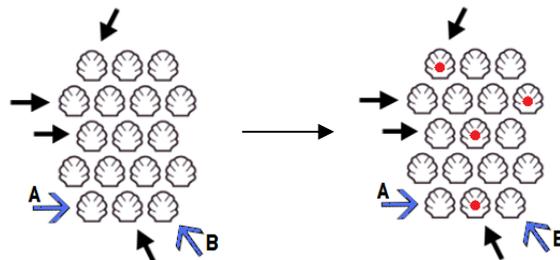


*Example:
ADECB*

7. Pearls - 10 points

Locate the position of all 11 pearls. Each arrow points to exactly one pearl and each pearl is pointed by one arrow. Pearls do not appear in neighbouring shells. For solving purposes ignore the blue arrows.

Answer Format: Write the number of pearls pointed by the blue arrows, starting with the arrow marked A and then B, C and D.



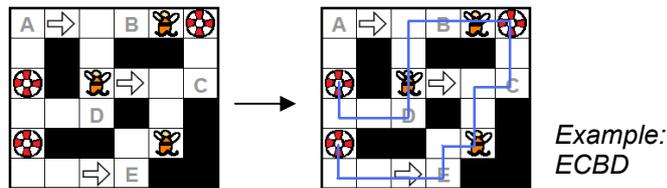
*Example:
12*



8. Lifesavers - 10 points

Starting from one of the lifesavers, draw a path that passes through all men overboard and a second lifesaver. The path may not overlap itself and ends at the remaining lifesaver. Arrows represent tides that must be followed correspondingly.

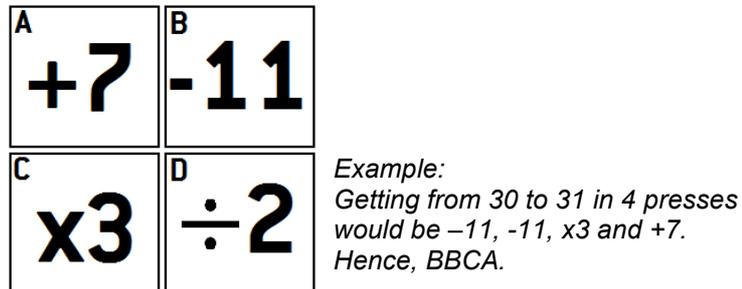
Answer Format: Starting from the starting point, write the letters visited in chronological order. Some letters may be unvisited.



9. Weird Calculator - 15 points

You own a weird calculator that contains the 4 buttons shown. Starting with a certain value, you would need to achieve another value in a specific number of presses of any buttons.

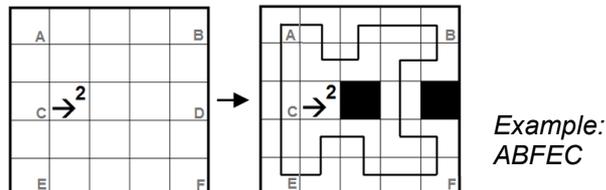
Answer Format: Write the corresponding letters for the buttons pressed in order.



10. Yajilin - 15 points

Blacken some cells so that the remaining squares can be used to draw a closed loop passing all blank cells. Numbered cells indicate the number of black cells in that direction and black cells cannot be adjacent to each other.

Answer Format: Starting from the top-left corner and going clockwise, write all letters that are visited in chronological order. Some letters may be blacked out. If the square marked 'A' is shaded in, start from the next square to the right.



11. The Giant Octopus - 3x5 points

Find three pairs of identical cells in the picture. Some cells may have been rotated, but never reflected.

Answer Format: Write the pairs of co-ordinates. 5 points for each pair.



12. Aquarium Display - 20 points

Place all 20 names of the listed sea creatures into the grid. Words read top-bottom and left-right. All words must interlock and no unlisted words may be formed. All E's are given in advance.
Answer Format: Write the content of the marked row, followed by the marked column, use '-' for blank squares.

↓

							O			B	
J	O	H	N	D	O	R	Y			L	
				U			S			O	
				G			T			W	
		S	P	O	N	G	E			F	
				N		U	R	C	H	I	N
				G		L				S	
						C	L	A	M	H	

BLOWFISH
CLAM
GULL
JOHN DORY →
OYSTER
SPONGE
URCHIN

Example:
(- - - -N-URCHIN, -R- -GULL)

13. Digital Futoshiki - 20 points

Fill in numbers 1-n so that each digit appears in each row and column. All comparison signs are obeyed and some LCD fragments are given.
Answer Format: Write the content of the marked row followed by the marked column.

↓

		<	
		-	

→

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

Example:
(4123, 4231)

14. Loch Ness Monster - 15 points

Locate the 45-cell long Loch Ness Monster in the grid. Nessie do not occupy cells with arrows and it does not touch itself, not even diagonally. Its head and tail are given. Arrows with numbers indicate the amount of cells occupied by Nessie in that direction. An example with a 10-cell long Nessie is shown.
Answer Format: Write the content of the marked row, followed by the marked column; using 'N' for Nessie and '-' for the rest.

↓

↓ ¹			↓ ³
↖ ³			↖ ³

→

↓ ¹			↓ ³
↖ ³			↖ ³

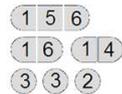
Example:
(-NNN-, NN- -)



15. Ship Sudoku - 20 points

Fill in numbers 1-9 in the grid so that each digit appears once in each row, column and outlined region. Then locate the labeled 10-ship fleet within the grid such that no ships touch each other, not even diagonally. Ships cannot occupy cells with waves. Ships may be rotated but not reflected.
Answer Format: Write the co-ordinates of the 4 one-unit submarines from top-bottom and left-right.

	A	B	C	D	E	F
1			1		6	
2	3			4		
3	4		5		3	
4		6		1		4
5			4			
6		3		5		



	A	B	C	D	E	F
1	5			2	6	
2	3	2	6	4	1	5
3	4				3	
4	2	6	3	1	5	4
5	6	5	4		2	
6			2	5	4	

Example:
F3, D5, B6

16. Consecutive Loop - 15 points

Using numbers 1-9, fill the grid so that no numbers repeat in any row and column. Adjacent cells with consecutive numbers are marked with a line. All the lines will form a single closed loop at the end. Crosses indicate where lines are not allowed to be drawn in. Lines can be freely drawn in at the edges. An example using numbers 1-6 is shown.
Answer Format: For each row, write all even numbers that are outside the loop from left-right. Use '0' if there is no such number.

1				3
	2			
2		3		
6	3			4



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

Example:
6,6,0,24

17. Voyage for Shark Fins - 20 points

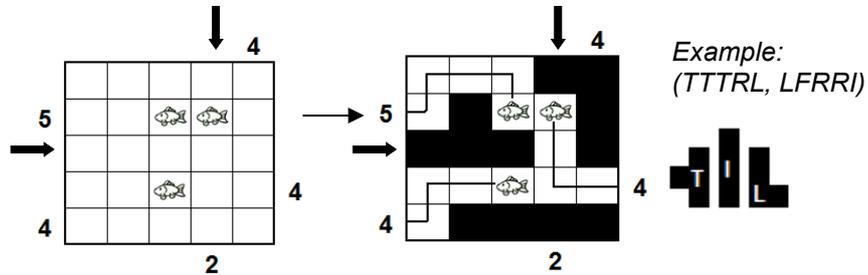
Find all but one of the listed words hidden in the grid. Words can go in any of the eight straight directions. Consecutive letters of F-I-N will appear as in the grid. Ignore all spaces and punctuation marks. For example RACE TO THE FINISH would be hidden as RACETOTHEISH
Answer Format: Write the word that cannot be found.



18. Pentomino Pool - 25 points

Some numbers outside the grid represent the length of a fisherman's rod at that position. Each fisherman gets his own fish. Rods can travel horizontally and vertically and they cannot be entangled. All unused cells must form the given set of pentominoes. Pentominoes can be rotated and/or reflected but cannot touch each other, not even diagonally. Unused numbers outside the grid indicate the number of cells occupied by a pentomino piece. Some squares are already shaded in, these are parts of pentomino pieces. An example using 3 tetromino pieces is shown.

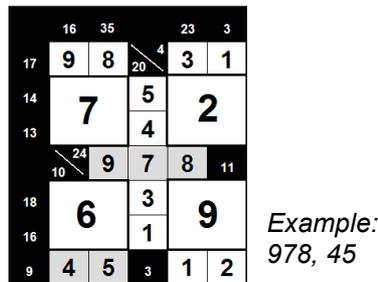
Answer Format: Write the content of the marked row, followed by the marked column; using 'R' for rod segments, 'F' for fish and the appropriate letter for pentomino pieces.



19. KakuroOH! - 30 points

Standard Kakuro rules apply. Fill in numbers from 1-9, so that the sum in each row and column match their corresponding value. No numbers may repeat in the same sum and some squares cover a bigger area.

Answer Format: Write the content of the first shaded row, followed by the second, third and the fourth row.



*Example:
978, 45*

20. Man Overboard - 25 points

Draw a closed loop by connecting neighbouring dots horizontally and vertically. Numbered squares indicate how much of its edges are used by the loop. Squares containing a man overboard must be inside the loop and squares containing shark fins must be outside loop.

Answer Format: Write the number of squares inside the loop for each row, from top to bottom.

