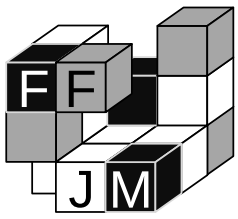
French WPC Test 2012 **Part 4**	Name

Part 4 – Assorted puzzles – 75 minutes

1.	**Croatia Domino Castle**	20
2.	**All Alone Fences**	25
3.	**Plus-minus**	20+40
4.	**Magnets**	35
5.	**Rolling Block Maze**	35
6.	**Coral Finder**	40
7.	**Equi-Kakuro**	35
8.	**Word Snail**	40+60
9.	**Pentominos**	50

Total: 400 points + time bonus (5 pts/minute)



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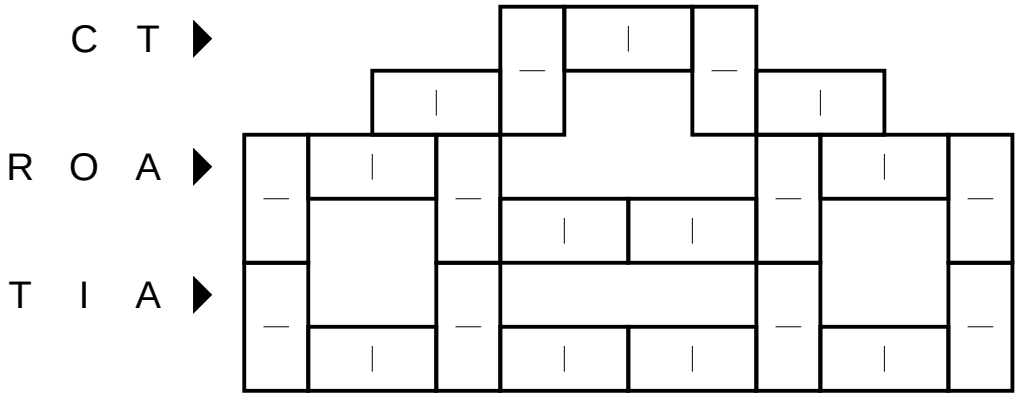
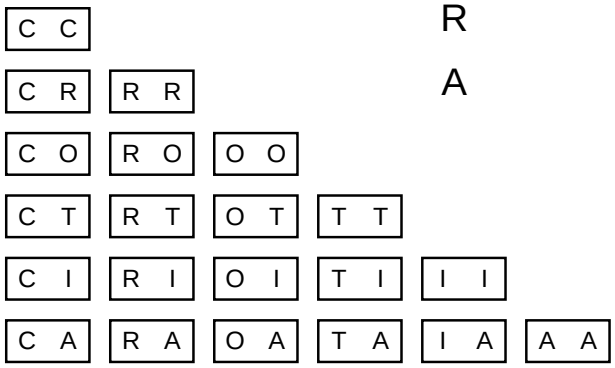
1. Croatia Domino Castle (20 points)

The castle depicted below has been built using the domino set shown below. When two dominoes touch by an edge, the domino halves that touch each other must carry the same symbol. The clues in the margin list all the symbols that appear in the corresponding row or column. Locate all the dominoes.





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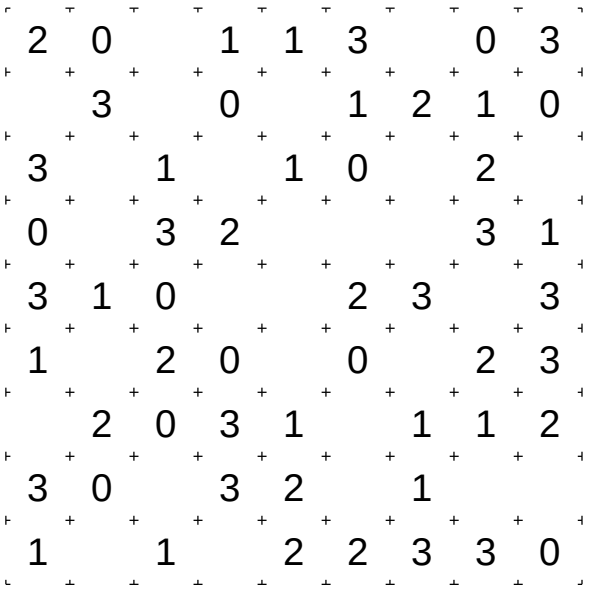
2. All Alone Fences (25 points)

Black out some of the numbers in the grid so that each row and each column contains only different digits. Blackened clues must not touch horizontally or vertically, and the remaining squares must all be connected to each other.

Then, draw a single closed loop by connecting neighboring points horizontally or vertically. Each numbered square indicates how many of its four edges are used by the loop.



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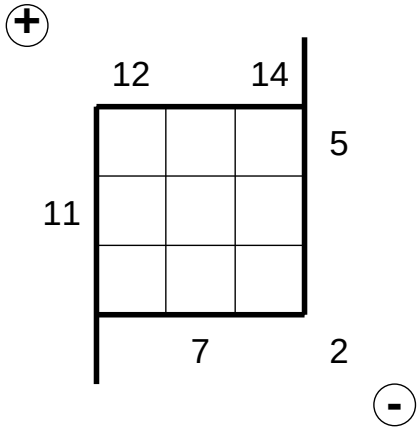
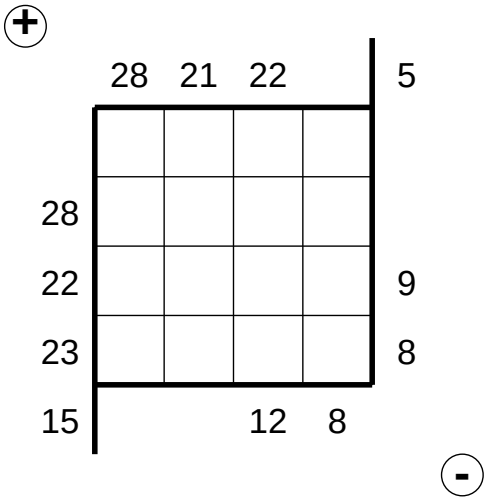
3. Plus-minus (20+40 points)

Place the numbers from 1 to 9 (or 1 to 16) in the grid, one in each square. The values above or to the left of the grid (left of the vertical bars) indicate the largest sum of two values among those found in the corresponding row, column or diagonal. The values below or to the right of the grid (right of the vertical bars) indicate the largest difference between two values among those found in the corresponding row, column or diagonal.





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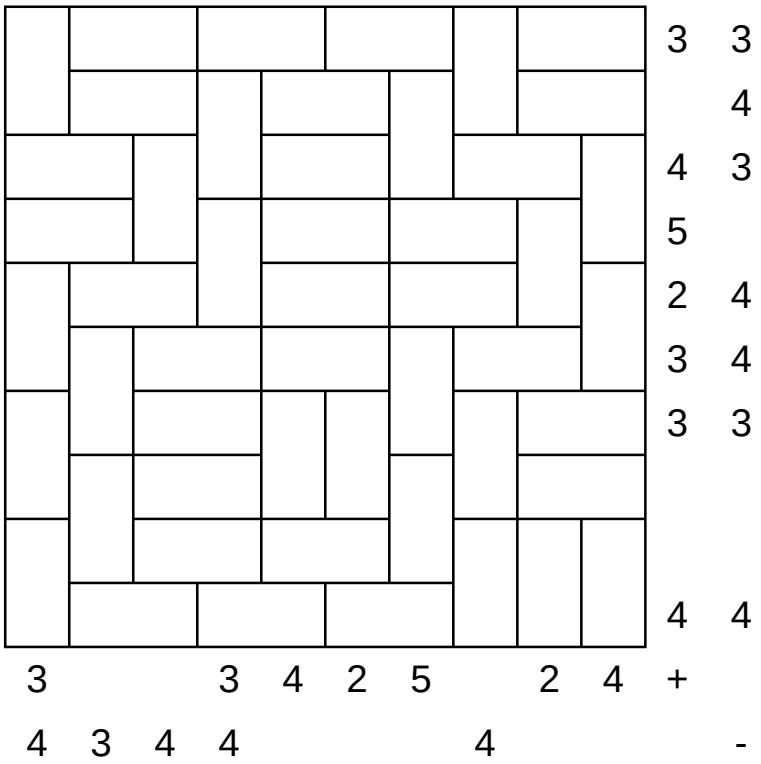
4. Magnets (35 points)

The grid is made up of magnetic and non-magnetic plates. Each magnetic plate has two halves: one positive (+) and one negative (−). Halves with the same symbol can not be horizontally or vertically adjacent. The numbers outside the grid indicate how many magnetic halves of each kind can be found in that row or column. Some clues have been erased. Find the polarity of all magnets.



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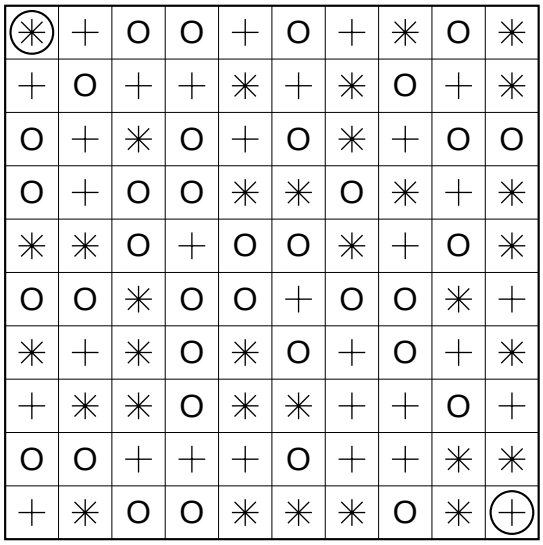
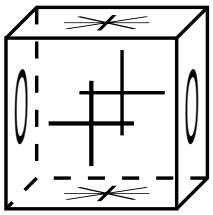
5. Rolling Block Maze (35 points)

A die carries on each of its faces one of the symbols ⋆, +, ○, so that opposite faces carry the same symbol (see figure). The die is initially on the upper-left-most square of the grid, with the face in contact with the grid carrying the symbol ⋆. It then rolls from square to square in the 4 directions, each time rotating 90 degrees about one of its edges until a new face is in contact with the grid. At each step, the face in contact with the grid must carry the same symbol as the square of the grid it occupies. Find the shortest path to the lower-right corner of the grid.





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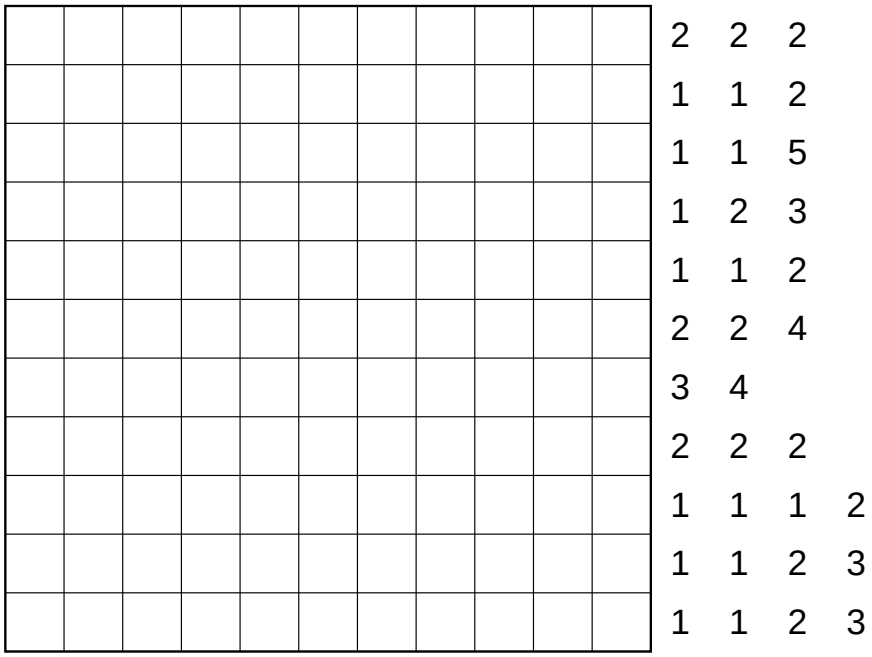
6. Coral Finder (40 points)

Blacken a connected set of squares (the coral) that does not touch itself, not even diagonally, and does not form any closed loops. The numbers outside the grid indicate the lengths of the consecutive parts of the coral in the given row or column. However, the numbers are given in increasing order, not in the order in which they actually appear in the grid. No 2x2 area may be covered by the coral.



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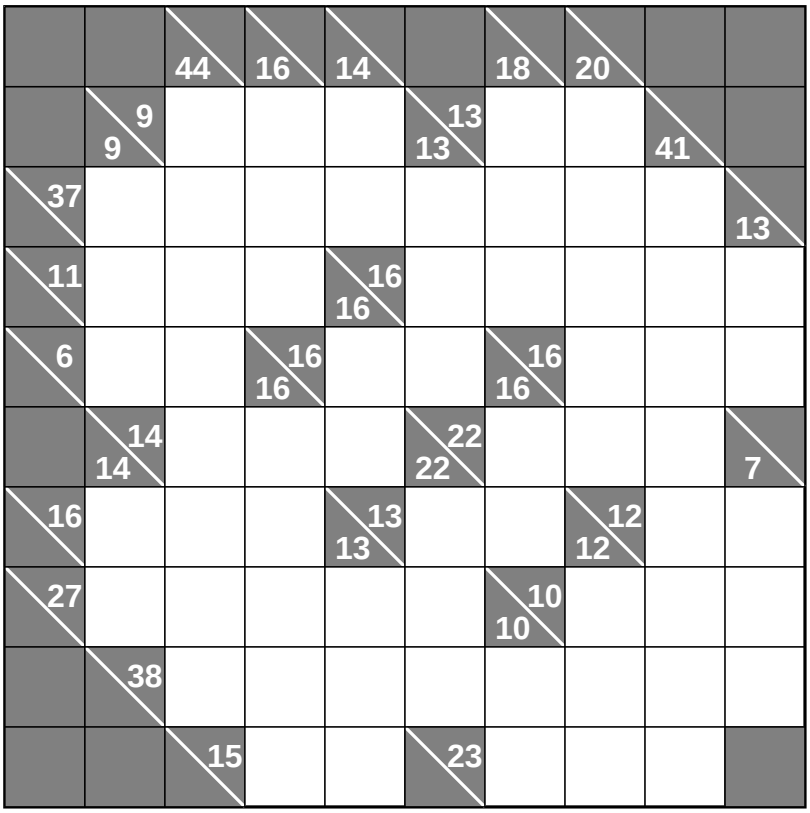
7. Equi-Kakuro (35 points)

Enter a single digit from 1 to 9 into each empty square of the grid, so that the digits in each series of white squares add up to the number given in the gray-colored cell at the top or to the left. A number above a diagonal bar refers to the digits to be filled in to the right of that cell. A number under a diagonal refers to the digits to be filled in below that cell. The digit 0 is not used, and no digit is ever repeated within a group.

(In this puzzle, two clues given in a same cell are always equal.)



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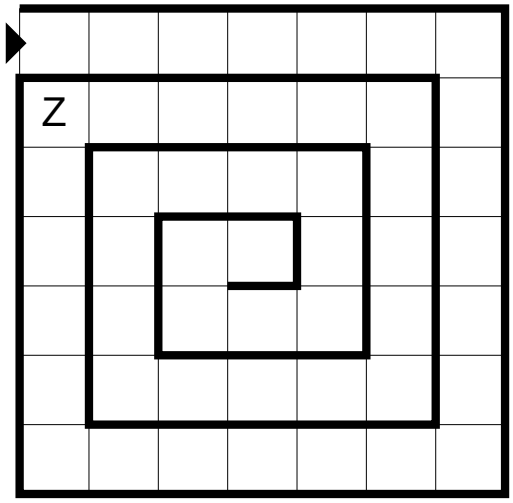
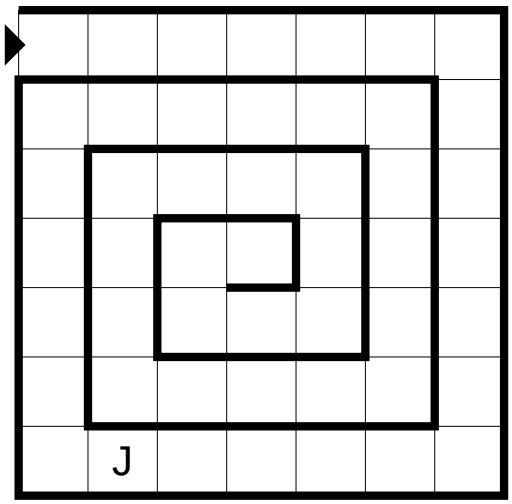
8. Word Snail (40+60 points)

Enter all the given words into the grid, so they can be read along the spiral. (The words are not listed in order). Consecutive words must be separated by at least one empty cell. No letter may be repeated within a single row or column. Some letters are already given.



BRAZIL
CROATIA
FRANCE
HUNGARY
JAPAN



HRVATSKA
ZAGREB
SPLIT
RIJEKA
OSIJEK
ZADAR
PULA

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9. Pentominos (50 points)

Place the 12 pentominos into the grid, so that they do not touch each other, not even diagonally. The pentominos can be rotated but not reflected. The squares containing an X must remain empty. The clues outside the grid indicate how many cells in the corresponding row or column are occupied by the pentominos.

						X						8
				X								4
X		X										4
				X		X						6
			X									4
					X				X			6
								X			X	5
	X											4
									X			5
X										X		6
		X										8
6	6	6	1	8	4	4	5	4	4	3	9