

1st OPEN SERBIAN OPTIMIZING PUZZLE CHAMPIONSHIP

24. NOVEMBER - 7. DECEMBER 2008.

<http://puzzleserbia.com/>



1st WEEK

MONDAY, 24.11. - SUNDAY, 30.11.

1. EASY MATH
2. ANACONDA
3. OLYMPIC SCRABBLE
4. KING'S SLALOM
5. ROLLING THE DIE
6. PENTOMINO CHAIN
7. DOMINO PATH

Puzzle 1

EASY MATH

Fill in the empty cells two set of numbers from 1 to 9. Each number should be used exactly twice. Maximize the result of the given expression.

$$\boxed{} \times \boxed{} \times (\boxed{} + \boxed{}) \times \boxed{} \times (\boxed{} + \boxed{}) \times \boxed{}$$

example:

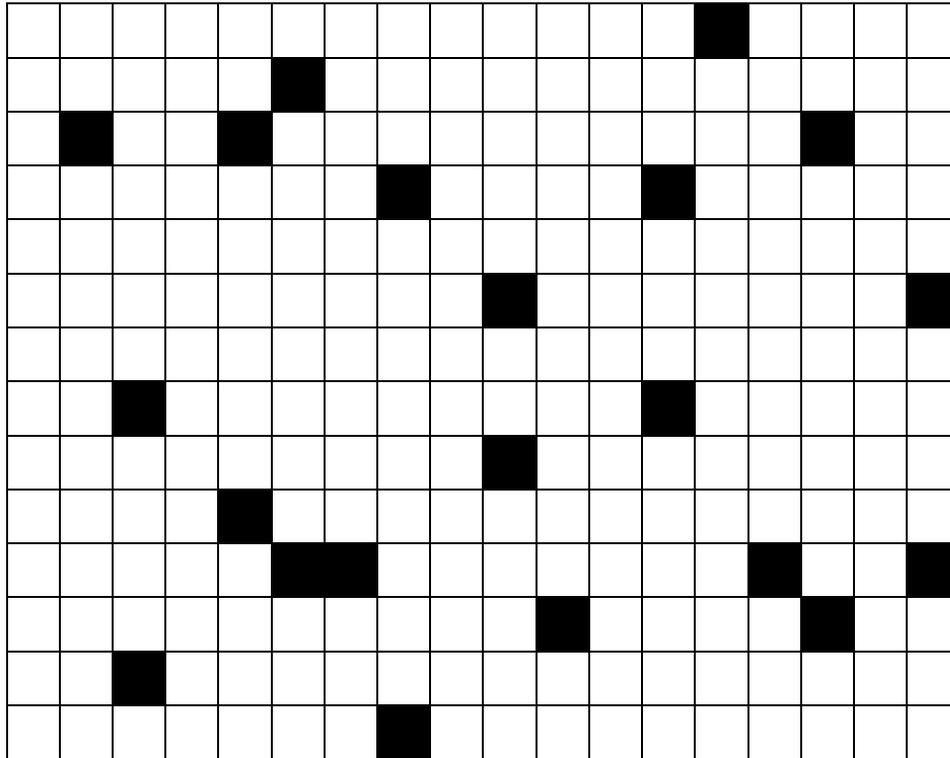
$$\boxed{4182} \times \boxed{669} \times (\boxed{247} + \boxed{3}) \times \boxed{31} \times (\boxed{87} + \boxed{59}) \times \boxed{5}$$

Answer format: Write your result, followed by the numbers in the cells. For the given example the answer would be: 15828315885000; 4182, 669, 247, 3, 31, 87, 59, 5.

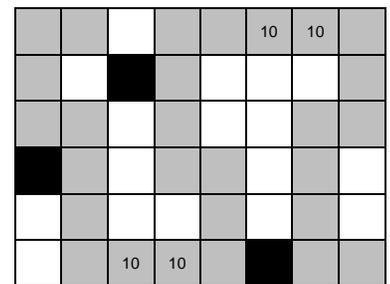
Puzzle 2

ANACONDA

Make the snake using standard snake rules. Snake cannot touch itself, not even diagonally. The snake body cannot pass through the black square. You can choose the cells for snake's head and snake's tail. Each tenth cell of snake's body, in both directions, cannot touch a black square, not even diagonally. The number of cells occupied by the snake (its length) must be an even number. Maximize the length of the snake.



example:



Answer format: Write the length of the snake, followed by the content of the grid, left to right, top to bottom. Use "S" if the cell is occupied by the snake and "x" if not. For the given example the answer would be: 28; SSxSSSSS, SxxSxxxS, SSxSxxSS, xSxSSxSx, xSxxSxSx, xSSSSxSS.

Puzzle 3

OLYMPIC SCRABBLE

Place some of the listed words (the names of the medalists from Beijing) in the grid in standard crisscross style (words appear either across or down, and all words formed by consecutive letters in the grid must appear in the list). Each cell can contain at most one letter. Each word can be used only once. All words must interconnect. Each used word is worth 4 points, and each used letter is worth 1 point. Maximize your result.

example:

| | | | | | | |
|---|---|---|---|---|---|---|
| P | E | I | R | S | O | L |
| A | | | | A | | |
| R | | B | O | L | T | |
| K | | | | M | A | |
| | E | M | M | O | N | S |
| | | | | N | | |

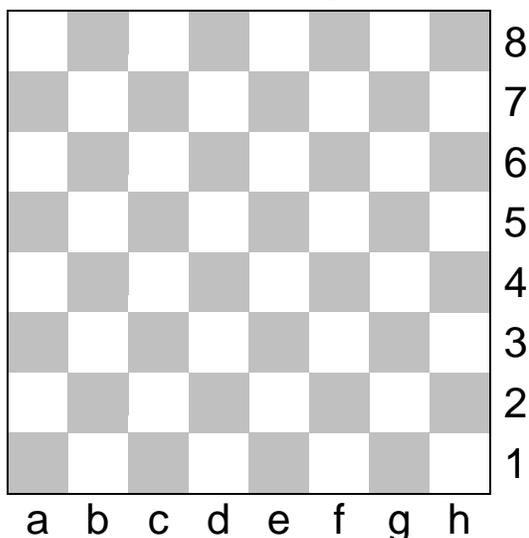
ABALO, ABEYLEGESSE, ASAHARA, BARRUFET, BEKELE, BERNARD, BINDRA, BIROS, BOLL, BOLT, BOOZER, BRYAN, BRYANT, BUNGEI, CALDERON, CAVIC, CLAY, COVENTRY, CROCKER, CSEH, DELFINO, DIBABA, DIX, DJOKOVIC, DU, EMMONS, EVORA, FEDERER, GAGO, GASOL, GINOBILI, IDOWU, ISINBAEVA, JAMES, JANIC, JELIMO, KARABATIC, KASAS, KIDD, KITAJIMA, KOSAREV, KULESHOV, KUMAR, LEBEDEVA, LIUKIN, MA, MASCHERANO, MESSI, NADAL, NAKAMURA, PARK, PEIRSOL, PELLIELO, PEREZ, PHELPS, POWELL, REBELLIN, REZENDE, RICE, ROBLES, RONALDINHO, RYBAKOV, SAFINA, SALMON, SANCHEZ, SAUTIN, SCOLA, SIMPSON, SULLIVAN, SUSS, SZECSEI, TAN, TETYUKHIN, TOMESCU, TSIKHAN, TWADDLE, VLASIC, VUJASINOVIC, WILLIAMS, ZHANG.

Answer format: Write your result, followed by the content of the grid, left to right, top to bottom. Use "x" for the empty cells. For the given example the answer would be: 52; PEIRSOL, AxxxAxx, RxBOLTx, KxxxMAX, xEMMONS, xxxxNxx.

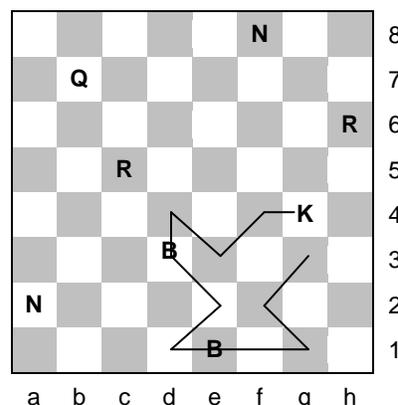
Puzzle 4

KING'S SLALOM

Place seven black pieces on the chessboard: one queen (Q), two rooks (R), two bishops (B) of opposite colours, two knights (N) and a white king (K) such that no piece is under attack from any other piece. In the initial position, pieces cannot occupy neighbouring cells, and in each row and in each column must appear exactly one piece. The white king is moving according to chess rules and cannot pass through a square that is under attack. It can land on any square on its way only once, and it can take black pieces. Maximize the king's route.



example:

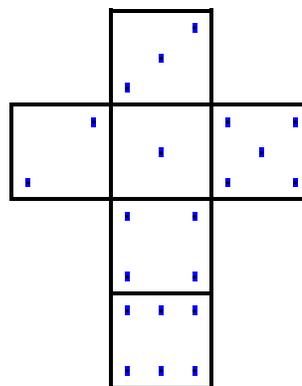
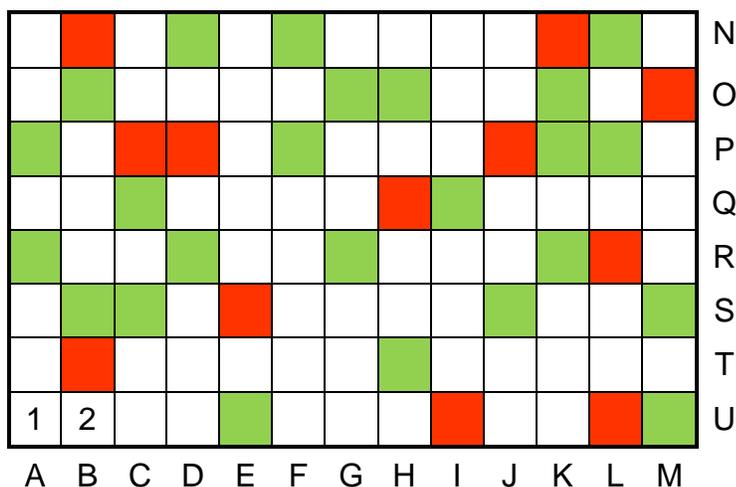


Answer format: Write the number of visited squares, followed by the initial coordinates of each piece, followed by the squares visited by the king, in order of visiting. For the given example the answer would be: 12; Kg4, Qb7, Rc5, Rh6, Bd3, Be1, Na2, Nf8; g4, f4, e3, d4, d3, e2, d1, e1, f1, g1, f2, g3.

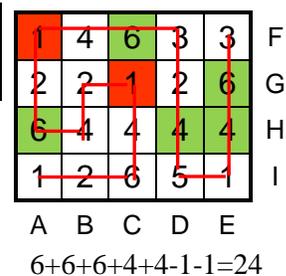
Puzzle 5

ROLLING THE DIE

Roll the die between edge-to-edge neighbouring cells starting from the left bottom corner, visit all the cells exactly once, and finish at the right top corner. In each cell write the number that appears on the top of the die. Your result is the sum of the numbers in the green cells minus the sum of the numbers in the red cells. In the starting position, the number that appears on the top of the die is 1. The first move must be to the right, and then number 2 is on the top of the die.



example:



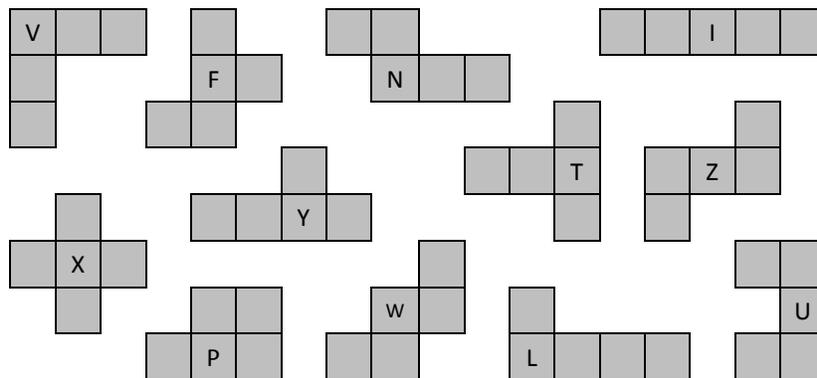
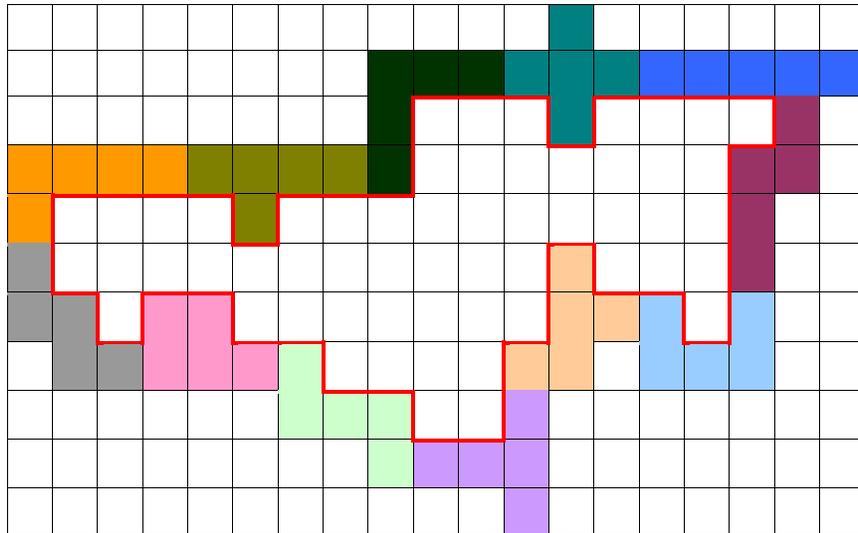
Answer format: Write your result, followed by the content of the grid, left to right, top to bottom, followed by the coordinates of all turns, in order of visiting. For the given example the answer would be: 24; 14633, 22126, 64444, 12651; CI, CG, BG, BH, AH, AF, DF, DI, EI.

Puzzle 6

PENTOMINO WHEEL

Connect the standard set of pentominoes in such a way that every pentomino is connected to 2 other pentominoes. Each connection must be on exactly one edge. Any pentomino can touch only two neighbouring pentominoes. Maximize the length of the inner loop perimeter (red line in the example). You can choose the size of the grid.

example:

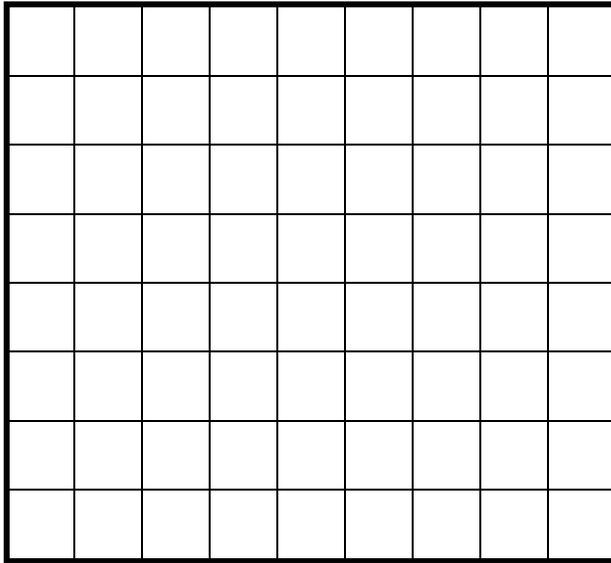


Answer format: Write the length of the inner loop perimeter, followed by the content of the grid, left to right, top to bottom. For each pentomino use the corresponding letter and use "x" for the empty cells. For the given example the answer would be: 56; xxxxxxxxxxxXxxxxx, xxxxxxxxVVVXXXIIIII, xxxxxxxxVxxxXxxxNxx, LLLLYYYYVxxxxxNNxx, LxxxYxxxxxxxxNxxx, WxxxxxxxxFxxxNxxx, WWxPPxxxxxFFUxUxxx, xWWPPPZxxxFFxUUUxxx, xxxxxxZZZxTxxxxxx, xxxxxxxxZTTTxxxxxx, xxxxxxxxxxxTxxxxxx.

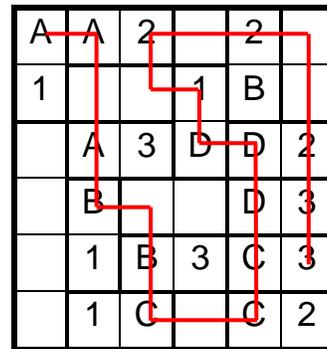
Puzzle 7

DOMINO PATH

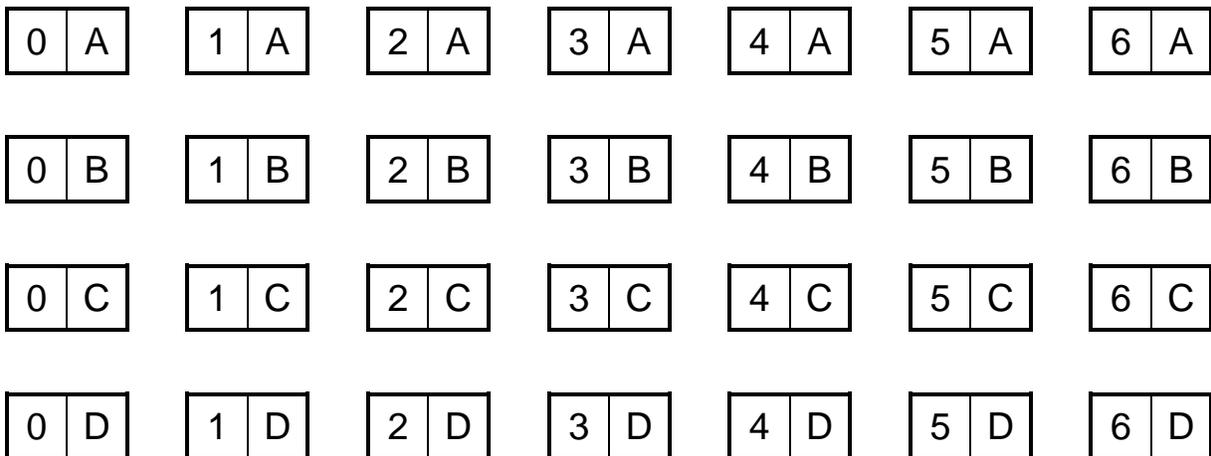
Place all given dominoes in the grid without overlapping. Then draw the path that cannot cross or overlap itself. The path must first pass through letters in alphabetical order (A,B,C,D), then through the numbers in increasing order (0,1,2,3,4,5,6). You can choose the starting and the finishing cell. The formula for the result is the following: the length of the path + the total number of letter and numbers that lay on the path. Maximize your result.



example:
(1-3)



$$24+17=41$$



Answer format: Write your result, followed by the content of the grid, left to right, top to bottom. Put the horizontal dominoes in the brackets. Use "x" for the empty cells. For the given example the answer would be: 41; A(A2)x2x, 1xx1Bx, x(A3)D(D2), xBxx(D3), x1(B3)(C3), x(1C)x(C2).

Send your answers to answers@puzzleserbia.com in simple text:

Name:

City, country:

1.

15828315885000; 4182, 669, 247, 3, 31, 87, 59, 5.

2.

28; SSxSSSSS, SxxSxxxS, SSxSxxSS, xSxSSxSx, xSxxSxSx, xSSSSxSS

3.

52; PEIRSOL, AxxxAxx, RxBOLTx, KxxxMAx, xEMMONS, xxxxNxx

4.

12; Kg4, Qb7, Rc5, Rh6, Bd3, Be1, Na2, Nf8; g4, f4, e3, d4, d3, e2, d1, e1, f1, g1, f2, g3.

5.

24; 14633, 22126, 64444, 12651; CI, CG, BG, BH, AH, AF, DF, DI, EI

6.

56; xxxxxxxxxxxxXxxxxx, xxxxxxxxVVVXXXIIII, xxxxxxxxVxxxXxxxNxx,
LLLLYYYYVxxxxxxxxNNxx, LxxxYxxxxxxxxNxxx, WxxxxxxxxxxFxxxNxxx,
WWxPPxxxxxFFUxUxxx, xWWPPZxxxFFxUUUxxx, xxxxxZZZxTxxxxxx,
xxxxxxxxZTTTxxxxxx, xxxxxxxxxxTxxxxxx

7.

41; A(A2)x2x, 1xx1Bx, x(A3)D(D2), xBxx(D3), x1(B3)(C3), x(1C)x(C2)