

Name

Country

Part VIII

Assorted Puzzles

9th World Puzzle Championship
October, 2000

1	Numerical Jigsaw	10 points
2	End View	10 points
3	Next!	10 points
4	RecTangles	10 points
5	Viewpoint	15 points
6	Stepping Stones	15 points
7	Spokes	15 points
8	Black & White	20 points
9	Do or Die	20 points
10	Eminent Domain	20 points
11	Gold Medal Boggle	25 points
12	Lay Bricks	25 points
13	Chasm Maze	25 points
14	Equations	25 points
15	Triangle Trisection	35 points
16	Russian Cross	35 points
17	Number Place	35 points
18	Fences	40 points
19	Hexasperation	45 points



1 - Numerical Jigsaw

10 points

Rearrange the five vertical strips so that each row contains a true equation. Strips can be rotated 180°, but not reflected. Write your answer in the grid provided.

1	0	=	2	=	8
=	2	1	1	8	=
-	6	÷	9	5	9
+	9	5	1	9	×

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2 - End View

10 points

Enter the letters A, B, C, D, and E once in each row and column. The clues outside the grid indicate which letter appears first from that direction. For example, A must be the topmost letter in the right column.

		A	C			A	
							B
C							
B							
E							B
			E	C	B		

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Which world capital in the Answer List comes next in this series? Circle your answer.

Note: the answer has nothing to do with the cities themselves—only their names.

1. LONDON
2. SEOUL
3. DAMASCUS
4. MOGADISHU
5. ISLAMABAD
6. WASHINGTON
7. OTTAWA
8. MONROVIA
9. PHNOM PENH
10. ?

Answer List:

AMSTERDAM

BUDAPEST

CANBERRA

GEORGETOWN

KAMPALA

PYONGYANG

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4 - RecTangles

10 points

Divide the grid into rectangles so that each region contains at least one number. Each number inside a rectangle must be the length of one of the edges of that rectangle (for example, a 2x4 rectangle can contain any number of 2s and 4s; a 3x3 square can contain any number of 3s).

No two rectangles can have the same dimensions, regardless of orientation (for example, you cannot use both a 1x3 and a 3x1 rectangle).

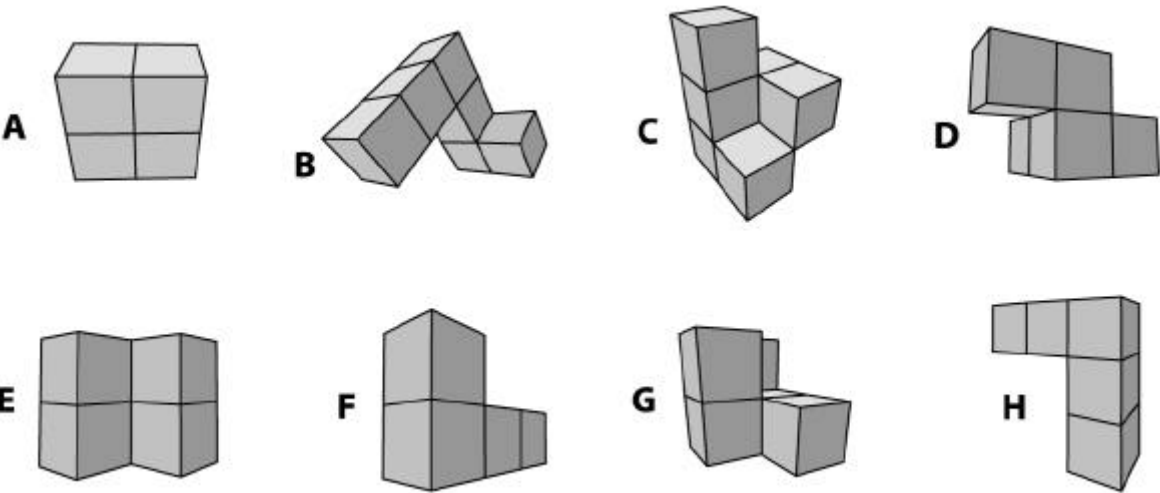
	2		4		4	
						1
	2					
3						6
					2	
4						
	3		1		4	

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5 - Viewpoint

15 points

Each of the 8 blocks shown is composed of 6 identical cubes. (the perspective of the drawing sometimes hides some of the rear cubes. Figuring out their position is part of the puzzle.) Group the 8 blocks into 4 pairs of identical shapes. Label the pairs in the box below.



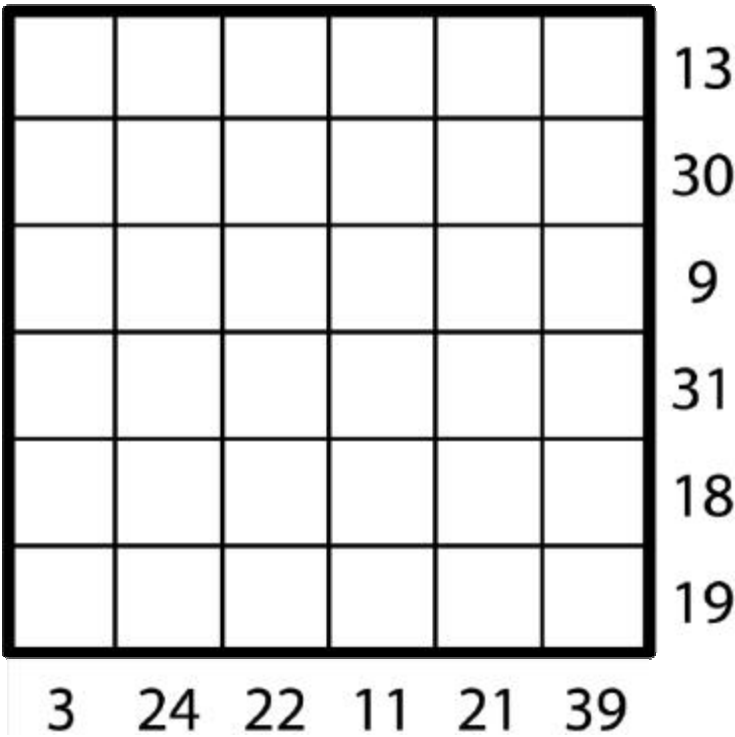
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6 - Stepping Stones

15 points

Place the numbers 1 through 15 into the grid, in order, so that each number is in the same row or column as the number preceding it. The resulting path may cross or double-back on itself, and successive numbers need not be adjacent.

There must be either two or three numbers placed in each row and column. The numbers outside the grid reveal the sum of the numbers in the corresponding row or column.

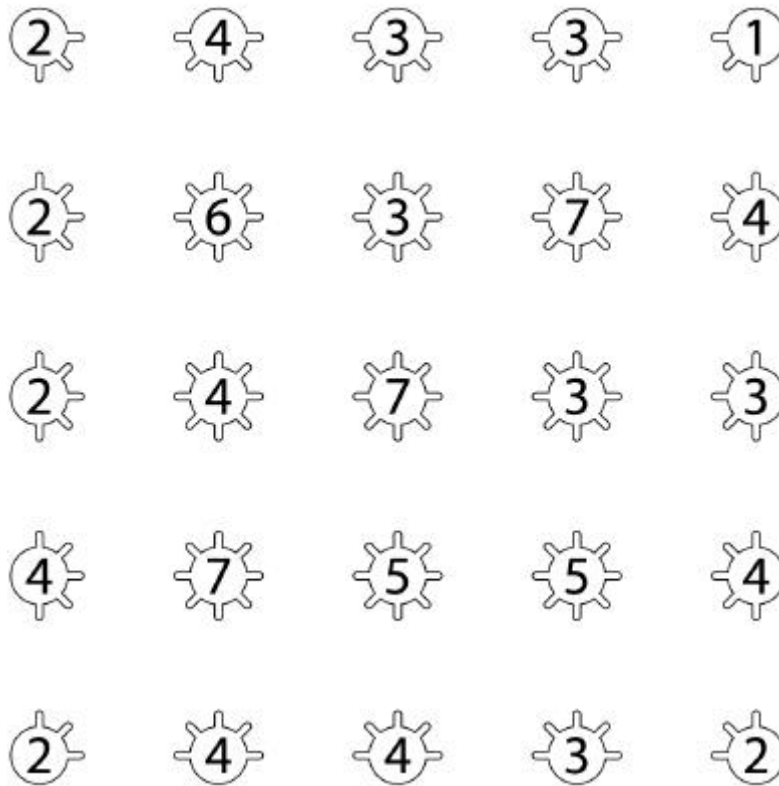


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7 - Spokes

15 points

Draw spokes connecting neighboring hubs, horizontally, vertically, and diagonally. The number in each hub indicates the number of spokes that connect to that hub. All hubs are interconnected, and spokes cannot cross one another.



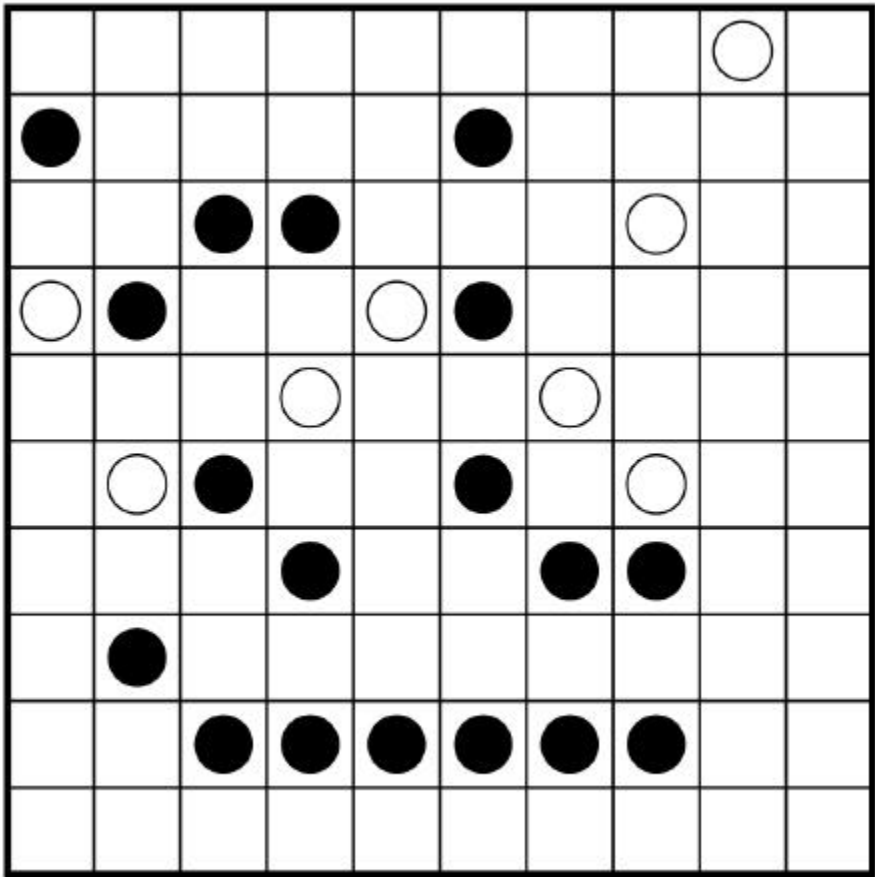
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8 - Black & White

20 points

Fill each square with either a black or white circle. All the squares containing white circles must be connected to each other horizontally or vertically. Similarly, all the squares containing black circles must be connected to each other horizontally or vertically.

No 2x2 region can contain four circles of the same color.



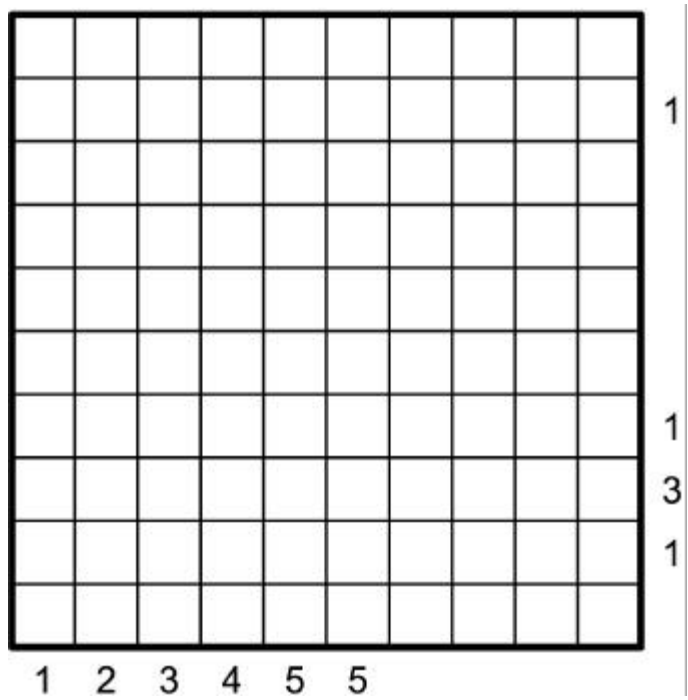
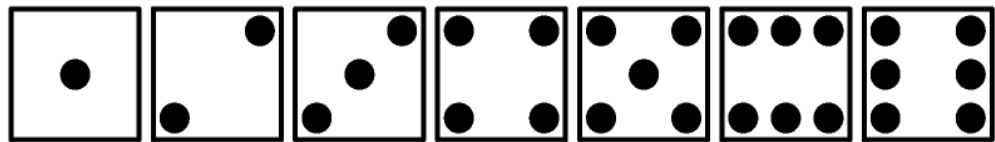
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9 - Do or Die

20 points

Place the 6 dice into the grid, each showing a different face. A face covers a 3x3 square region in the grid; faces are not allowed to overlap. The numbers outside the grid indicate how many pips are in the corresponding row or column.

The faces must be oriented as shown; note that the 6-face can be oriented either vertically or horizontally.



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10 - Eminent Domain

20 points

One or more horizontal or vertical lines are drawn from each numbered square. Lines cannot cross black squares or other numbered squares. Each number indicates how many squares are connected by its lines; the numbered squares themselves are not counted. No lines overlap or intersect each other, and each empty square is covered by exactly one line.

						16					4
6								5			
			4								
										10	
				8							
		7									4
6									11		
							8				
	7										
								4			
			6								4
6					10						

11 - Gold Medal Boggle

25 points

Fit the last names of these 10 Olympic track and field gold medalists into a 4x4 grid so that each name can be spelled out as on a Boggle board. That is, each name must be spelled out in order by proceeding from letter to consecutive letter horizontally, vertically and/or diagonally. The letters in the 4 corner squares have been positioned for you.

G			L
A			
L			D

ADKINS, Derrick (1996)
EVANS, Lee (1968)
IRONS, Frank (1908)
KEINO, Kipchoge (1968 & 1972)
LOWE, Douglas (1924 & 1928)
O'BRIEN, Dan (1996)
OWENS, Jesse (1936)
READ, Norman (1956)
SALING, George (1932)
VIREN, Lasse (1972 & 1976)

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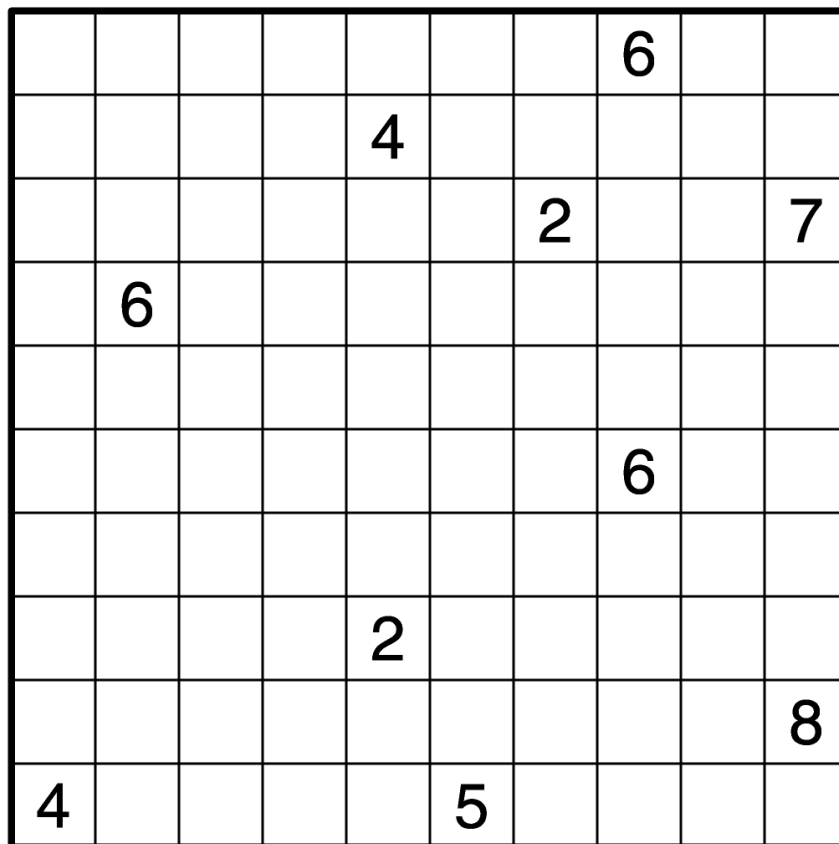
12 - Lay Bricks

25 points

Each number in the grid is part of an island. The number represents the number of squares in the island, including the numbered square itself. The squares that make up an island must be connected horizontally and/or vertically.

Islands cannot touch each other horizontally or vertically; however, they can touch diagonally.

The remaining squares represent water and must be painted black. The water squares form a completely connected path around the islands, where successive squares share an edge either horizontally and vertically. No 2x2 region can be completely covered by water.



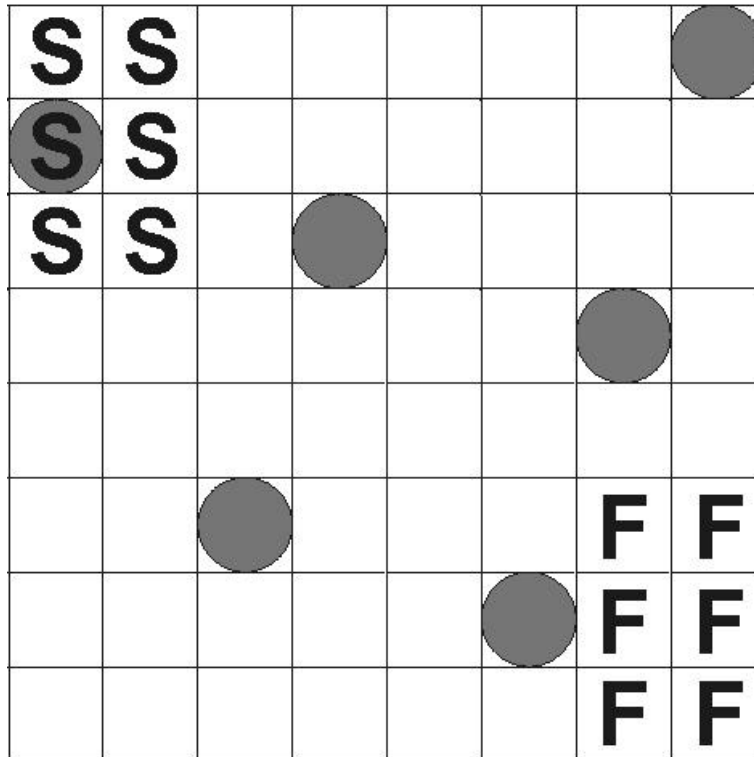
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13 - Chasm Maze

25 points

Roll a 1x2x3 block from the Start (block lying flat on the S squares) to the Finish (block lying flat on the F squares).

The circles indicate chasms; all other squares in the grid represent firm ground. The block may straddle a chasm, provided it is supported at all corners by firm ground. Otherwise, the block cannot roll over a chasm. Indicate the moves by a sequence of directions: U (up), D (down), L (left), and R (right).



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14 - Equations

25 points

Enter a different digit from 1 to 9 into each of the boxes, so that each of the four equations reading across is true. Normal mathematical operator precedence applies (multiplication done before addition).

$$\begin{array}{cccccccccccccccc} \boxed{} & + & \boxed{} & = & \boxed{} & \times & \boxed{} & \times & \boxed{} & = & \boxed{} & \times & \boxed{} & + & \boxed{} & + & \boxed{} & = & \boxed{} \end{array}$$

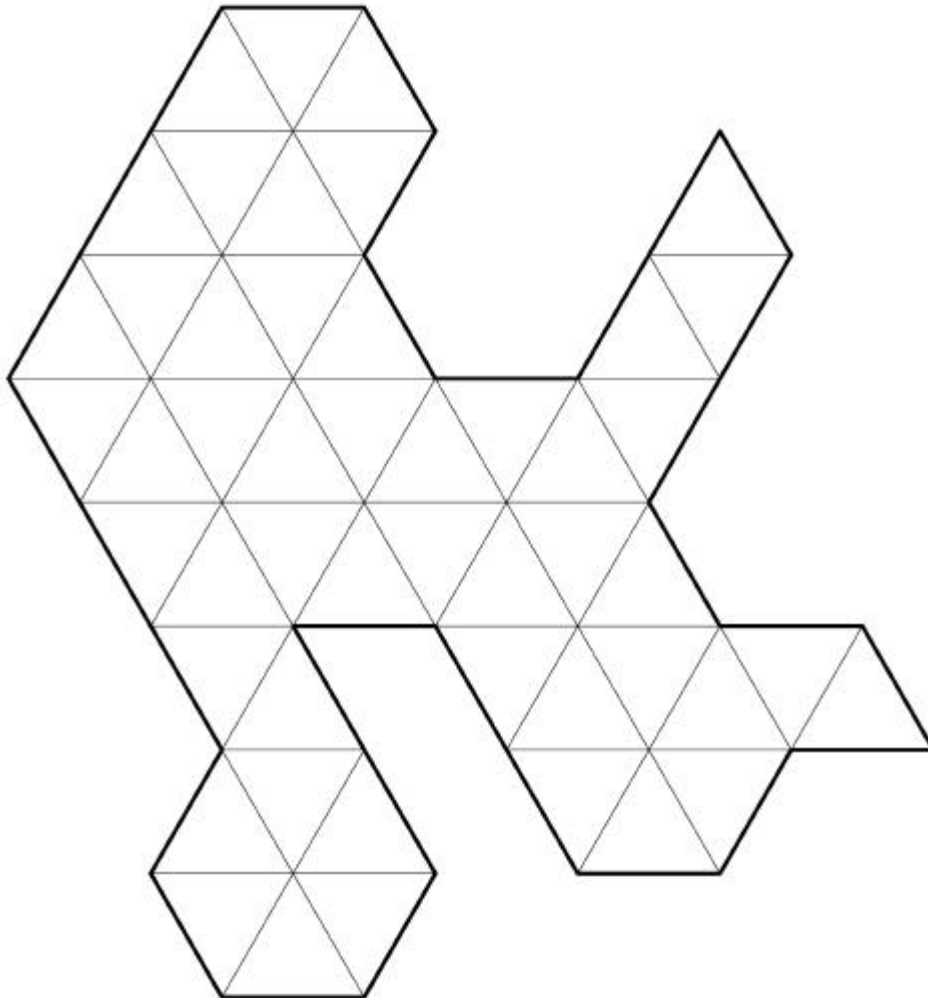
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15 - Triangle Trisection

35 points

Divide the figure into three contiguous pieces that can be reassembled to form an equilateral triangle. Pieces can be rotated, but not reflected.

The grid lines are given to show the true proportions of the diagram; your cuts may be anywhere.



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The 48 Russian Cyrillic words listed below are all spelled using only letters of the Roman alphabet (A, B, E, M, H, O, P, C, T, and X). You can fit 47 of them in the crisscross grid, reading across and down, one letter per space, following the usual crisscross rules. No word will be used more than once. When you're done, one word will be left over. Which one is it?

Note: it is not necessary to complete the crisscross to solve the puzzle—just identify the unused word.

4 letters

BEHA (vein)
HOPA (burrow)
COBA (owl)
COXA (peasant's plow)
OXPA (ocher)
TEMA (theme)

5 letters

ACTMA (asthma)
BAXTA (sailor's watch)
BECHA (springtime)
BOBCE (completely)
BOPCA (nap of cloth)
MACCA (heap)
HOPMA (standard)
OCTPO (sharply)
OXOTA (desire)
PBOTA (spewing)
POBHO (exactly)
CBAXA (match maker)
COHHO (having a drowsy air)
CCOPA (quarrel)
CXEMA (scheme)
TPABA (grass)
TPATA (expanse)

6 letters

BEHEPA (Venus)
BOPOHA (crow)
OTPABA (poison)
OXPAHA (guard)
CAPAHA (kind of lily)
CECTPA (sister)
CHOCHO (so-so)
TEHETA (net)
TEPACA (terrace)
TETEXA (stout)

7 letters

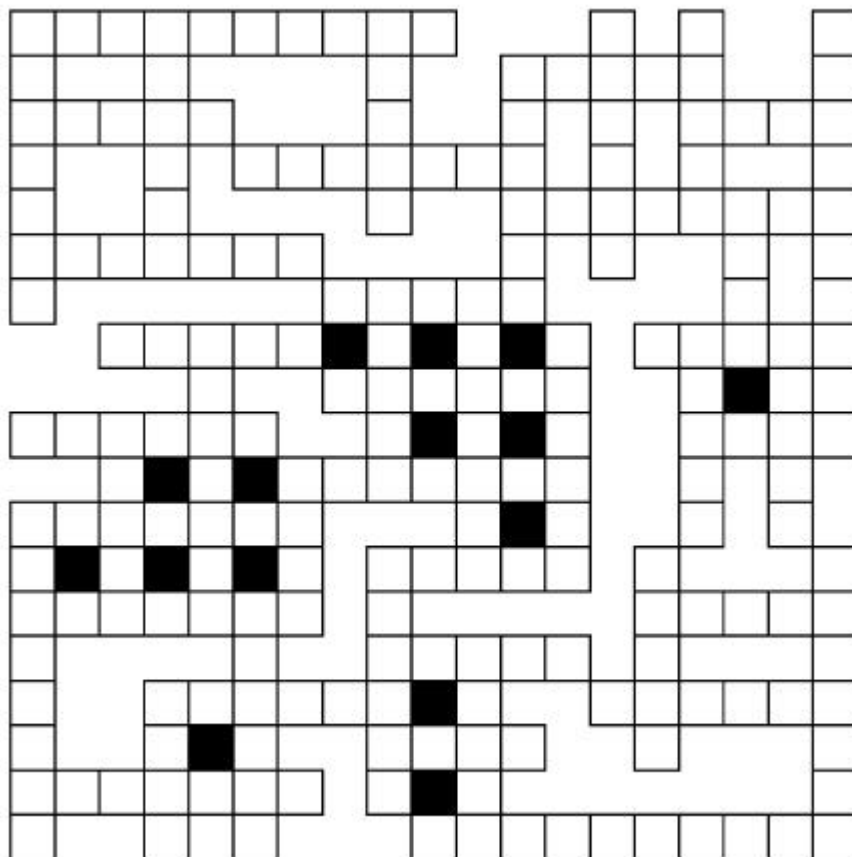
BCEMEPO (seven times)
HAPABHE (on equal terms)
HEOXOTA (unwillingness)
HEPABHO (if)
PBOTHOE (emetic)
CPAMOTA (shame)
CTOPOHA (side)
CTPAHHO (strangely)
TEMHOTA (darkness)
TPAXOMA (trachoma)

8 letters

PACTPATA (dissipation)
COXPAHHO (in good keeping)
CTAPOCTA (bailiff)

10 letters

MACTEPCTBO (business)
CAMOOXPAHA (self-preservation)



17 - Number Place

35 points

Fill the grid with the digits 1 through 9 so that all nine digits appear exactly once in each row, each column, and each of the nine highlighted regions.

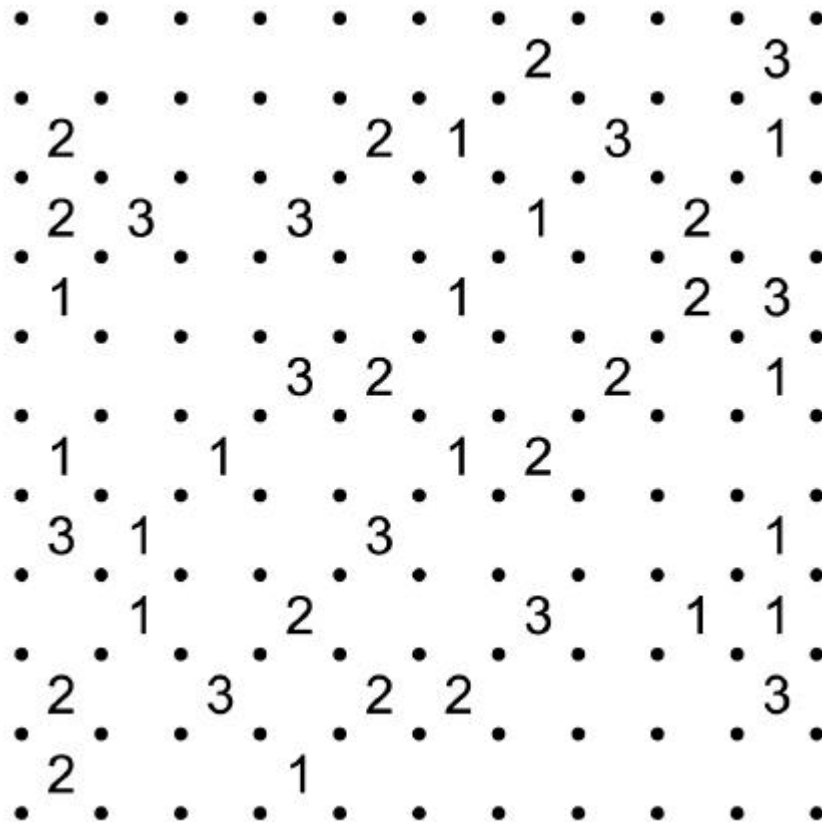
3			8		5			
			6	1		2		
4		5			1		6	
9							4	
					6		7	2
8								
6								9
		4	5					1

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18 - Fences

40 points

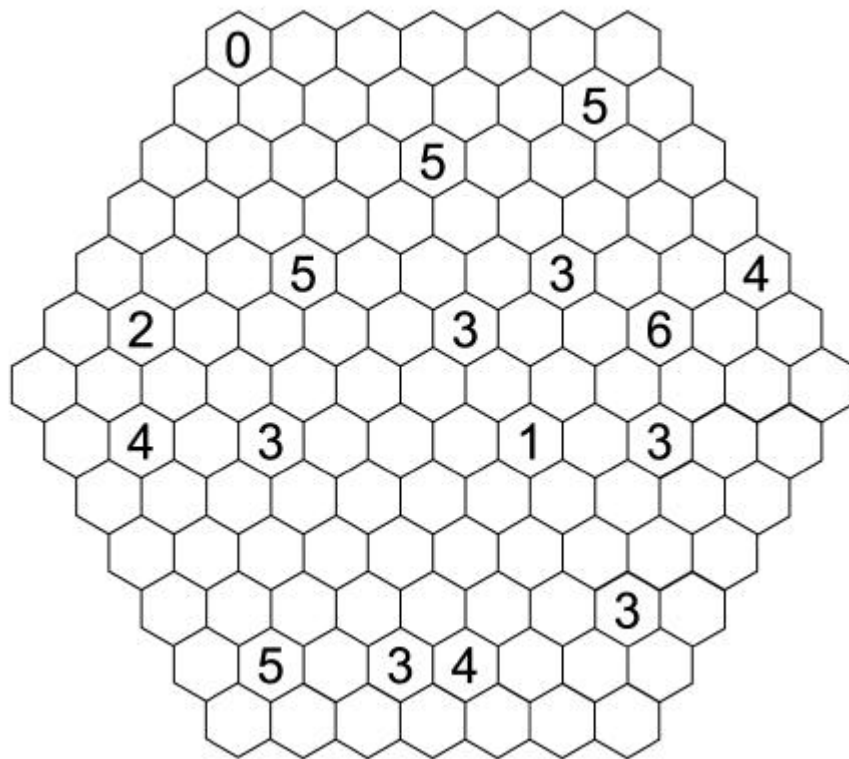
Draw a single continuous loop by connecting neighboring dots horizontally and vertically (but not diagonally). A numbered square indicates exactly how many of its four edges are used by the path.



Find a looped path through the grid subject to the following constraints:

1. The path must proceed from one cell to an adjacent cell,
2. It must not pass through a cell more than once,
3. It must not go through any numbered cells,
4. It must never make a sharp-angled turn (that is, a turn at a 60° angle).

Each number indicates how many of the adjacent cells are part of the path.



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