

Name

Country

# Part IV

## Manipulative Puzzles

9<sup>th</sup> World Puzzle Championship  
October, 2000

- |   |                   |           |
|---|-------------------|-----------|
| 1 | Sliding Pyramid   | 20 points |
| 2 | Roundabout        | 20 points |
| 3 | Stealth           | 40 points |
| 4 | Zome Construction | 40 points |

30 bonus points for the solution to #1 (Sliding Pyramid) that uses the minimum number of moves.



# 1 - Sliding Pyramid

20 points

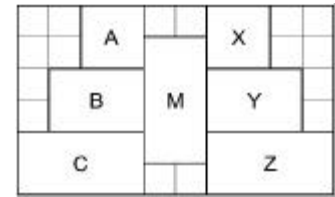
Place the 7 blocks (A, B, C, M, X, Y, Z) in their starting positions, as shown to the right. Slide the blocks one at a time to reach the goal position, also shown to the right.

Each move is the continuous motion of a single block to an adjacent empty space within the grid. Blocks can never rotate or overlap other blocks.

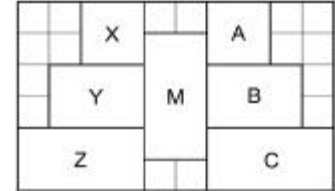
Write your moves in the space provided below. For each move give the letter of the block followed by an arrow indicating the direction(s) of movement. For example: **A↓**, **B↻**, etc.

Any correct solution earns 20 points. A solution using the minimum number of moves (31) will earn a 30 point bonus.

Start:



Goal:

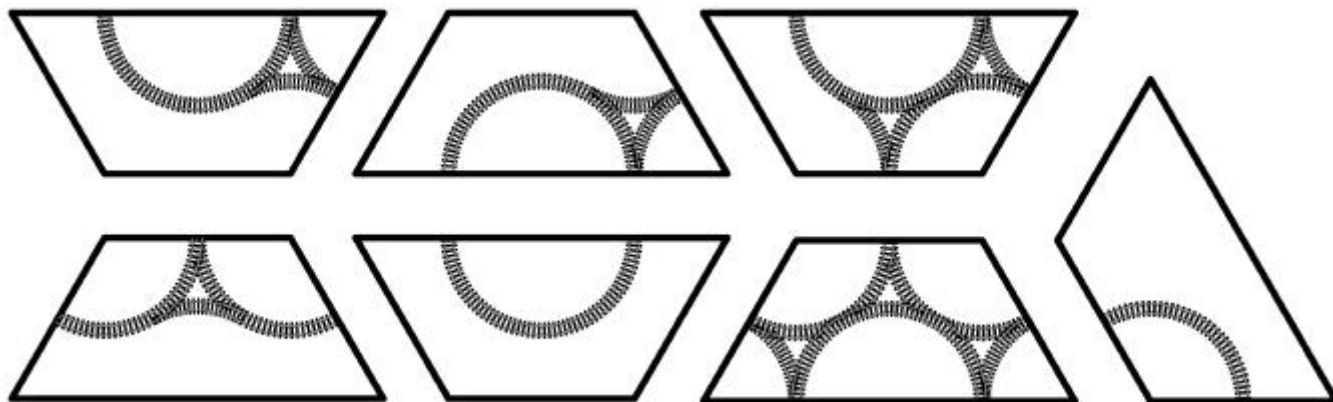



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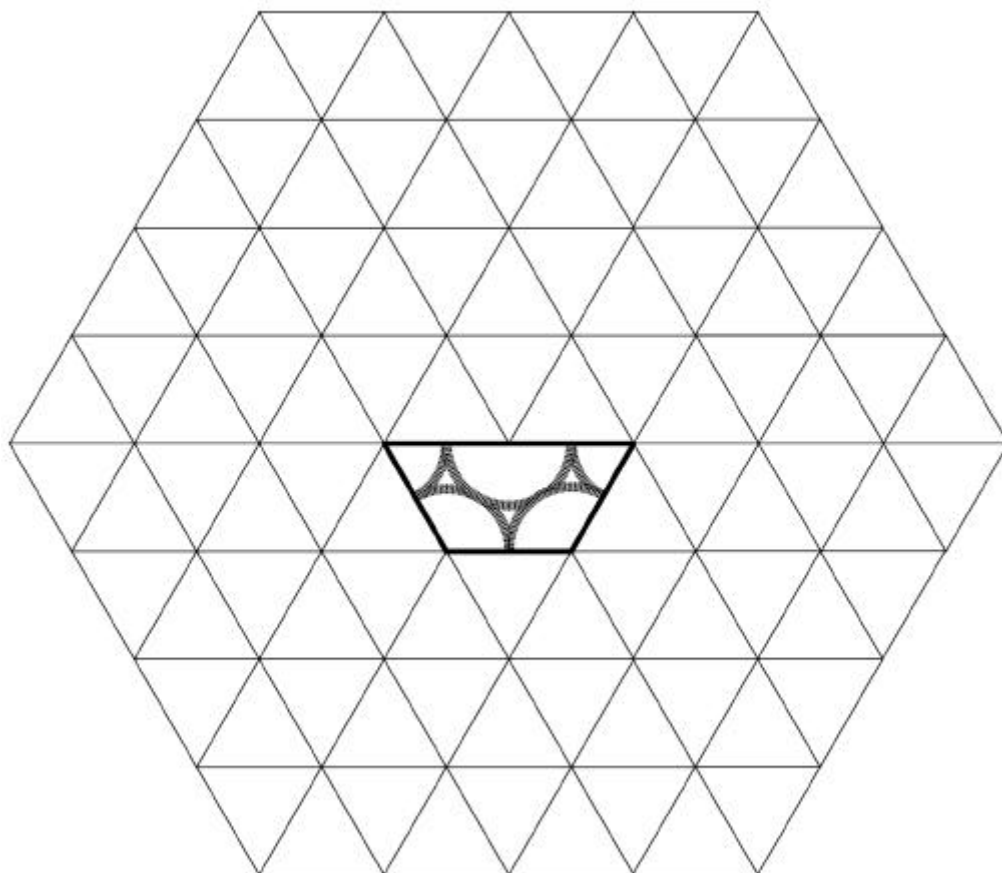
## 2 - Roundabout

20 points

Arrange the 7 pieces to create an island containing a closed and continuous network of curved railroad track and roundabouts. No track runs off the edge of the island, there are no dead-ends, and there are no holes in the middle of the island.



Draw your answer in the grid below. Note that one piece is already placed for you.

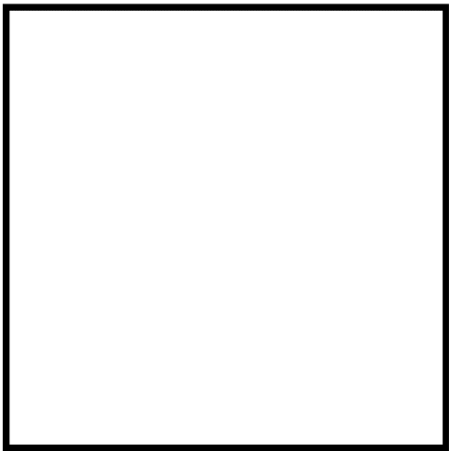
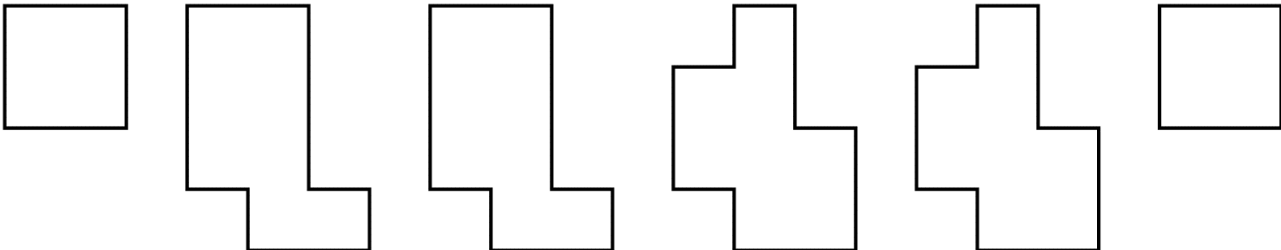


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# 3 - Stealth

40 points

Arrange the 6 pieces so that they fit flat in the given tray. Pieces may be reflected and rotated.  
Draw your answer in the square below.



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## 4 - Zome Construction

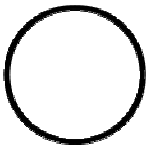
40 points

Assemble all the Zome pieces (15 struts and 6 nodes) so that each strut is connected to exactly two nodes. Struts cannot bend, and they cannot touch each other (except at the point where they connect to a node).

Hint: one node is connected to only yellow struts.

Place your assembled solution in the provided paper bag.

6 - white nodes



5 - yellow struts



2 - green struts



1 - short blue strut



5 - medium blue struts



2 - long blue struts



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