## *SCRAMBLED SQUARES* PUZZLE CHALLENGES

With no overlaps or voids, arrange all twelve pieces into the following shapes:

- 1. A single square.
- 2. A single triangle.
- 3. Two squares.
- 4. Two triangles.
- 5. One square and one triangle (two solutions).

Each solution is to be constructed with no adjacent tiles having the same color (map-coloring).

This puzzle could have been constructed over two thousand years ago—but wasn't.

*Hints:* The diagram solves #1 as a 5x5 square, and #3 is solved by a 3x3 square and the 4x4 square shown. The bases are 3, 4, and 5 inches, with triangular sides of the squares rearranged to form the new triangle.

Of course, this illustrates the Pythagorean Theorem generalization that similar figures on the sides of a right triangle follow the area relation.

It is also true that each construct is four-colored appropriately.

The solver may be reminded of the Archimedes Square or perhaps Dudeney's famous triangle-tosquare puzzle; but here, I think, these are misdirections.



The Scrambled Squares Puzzle is crafted in lasercut acrylic by Kadon Enterprises, Inc. ~ www.gamepuzzles.com in colors of the Canadian and Ottawa flags.



by Jeremiah Farrell, USA



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Made by Kadon Enterprises, Inc.

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