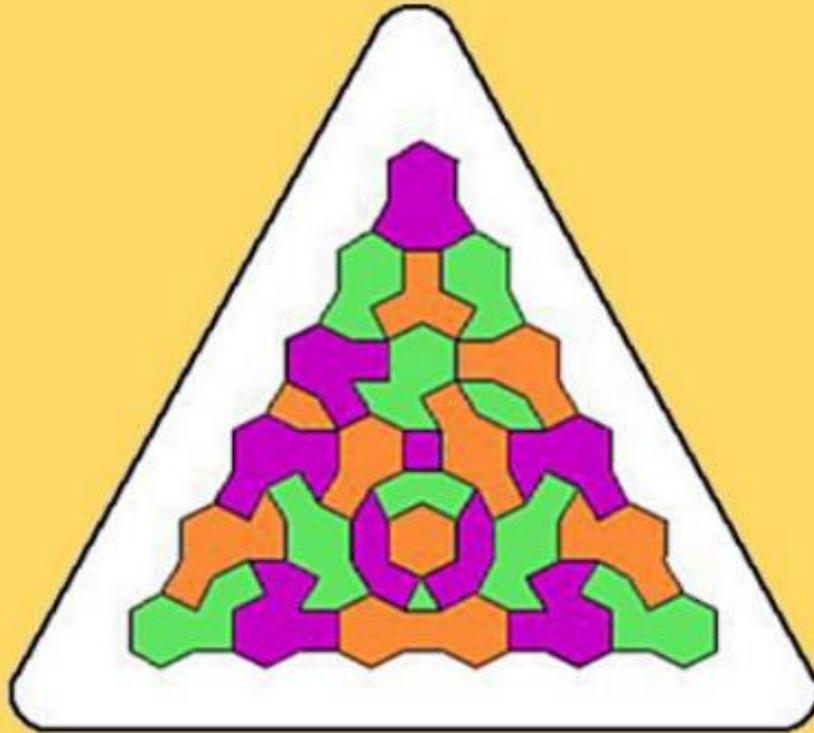
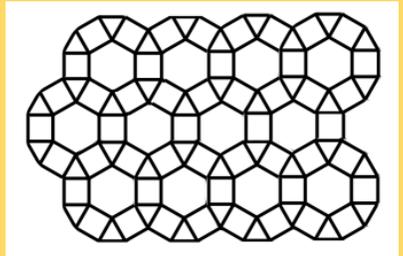


Birds and Bees™

Created by Andy Liu, Ph.D.



This special group of 28 tiles is a polyform set nicknamed by their designer as “Birds and Bees”. The set is defined as all the combinations of hexagons, squares, and equilateral triangles in 1, 2, 3, and 4 units joined that can be plotted onto this classic grid, with no more than 17 unit block edges per tile. There are 14 symmetrical tiles (one of each) and 7 pairs of non-symmetrical “twins”, each pair showing a left- and right-hand version. When solving with these tiles, they are not to be turned over to become the same orientation. Twins always share each other’s color. The three singletons (hexagon, square, triangle) have all different colors. The 28 tiles divide the three colors in groups of 9, 9, and 10.

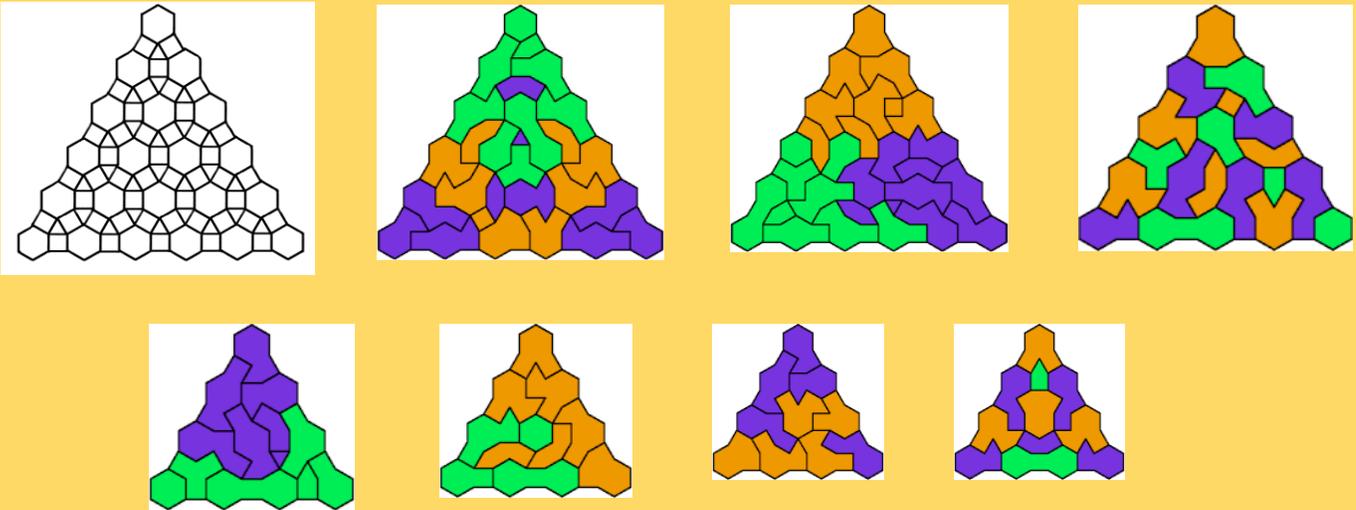


Make interesting designs in and out of the tray, with some or all of the tiles. Look for symmetrical patterns, join or separate the colors, and don’t leave holes. Create letters and numbers, flowers and animals, and anything else your imagination may suggest. How many ways can you fill the tray?

Play with one or two partners, taking turns adding a tile into the tray. Choice of goals: last one who can play wins; last one to play loses. If all pieces fit, all win.

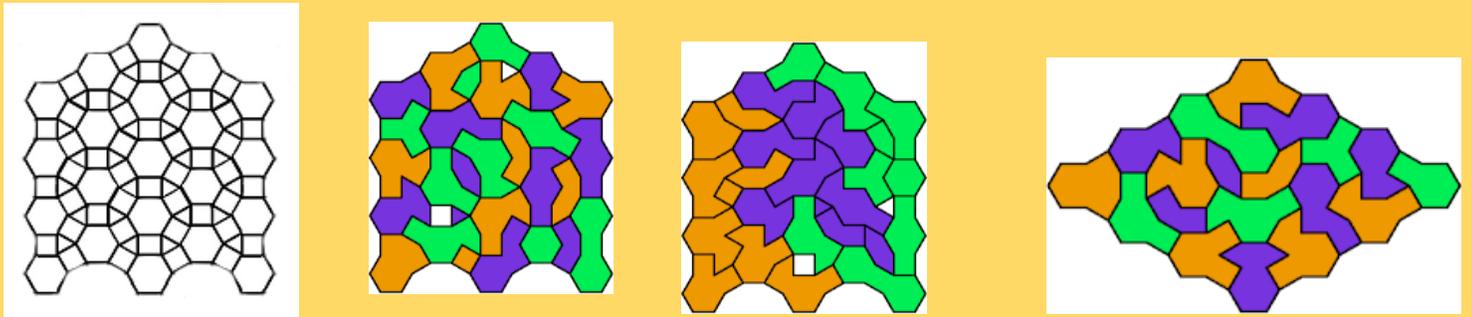
We thank George Sicherman for deriving most of these solutions!

Triangles—explore sizes 3, 4, 5, and 6, match and non-match colors.

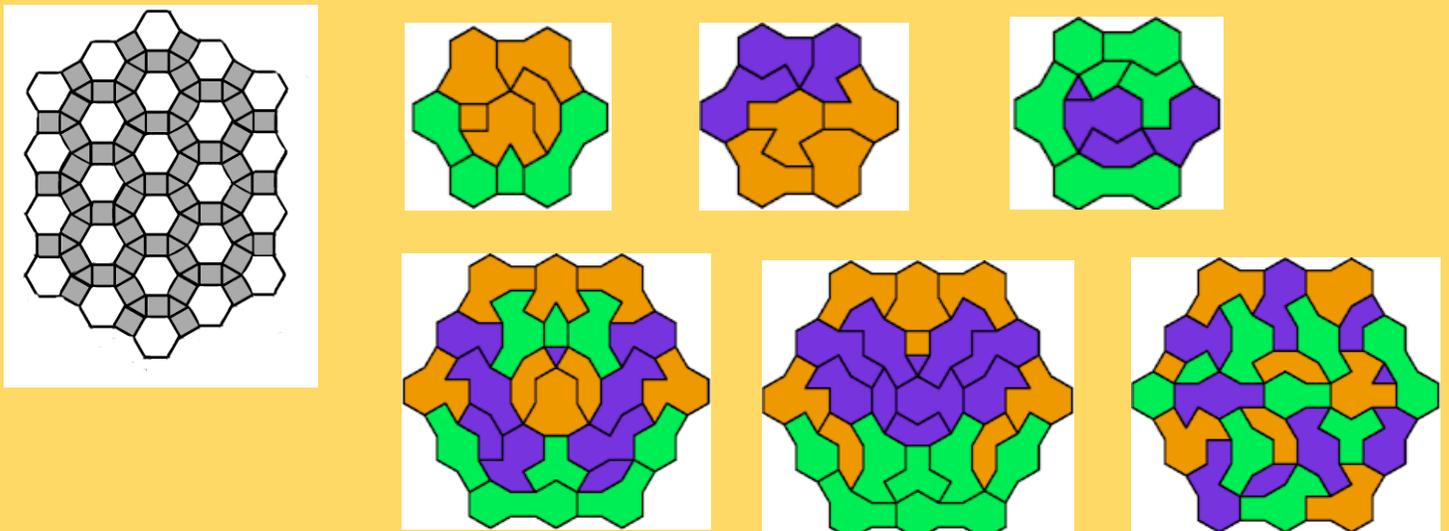


The Tent—match and non-match, contains 2 little spaces.

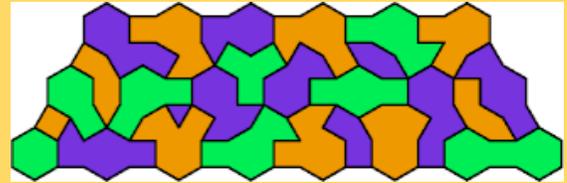
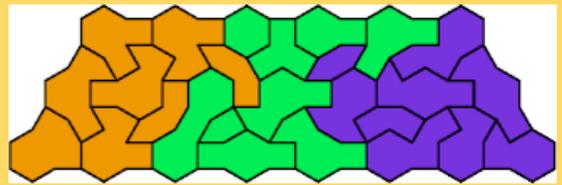
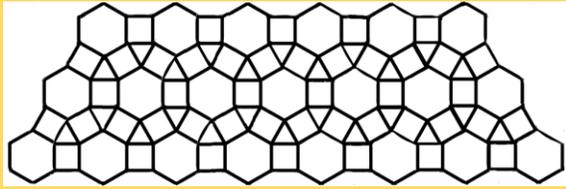
Size-4 Rhombus



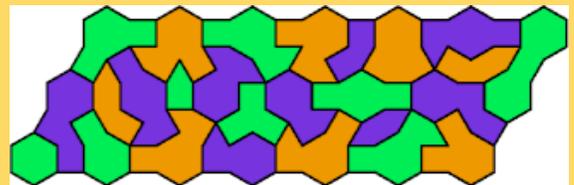
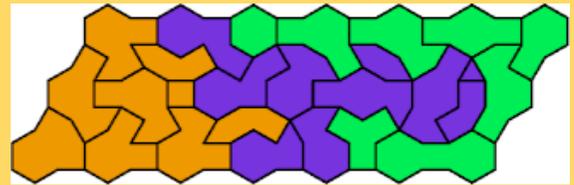
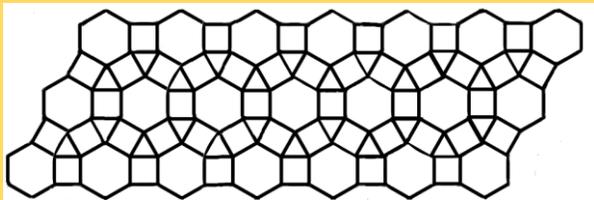
Hexagons—explore sizes 2, 3, 4; match or non-match colors, try for symmetry.



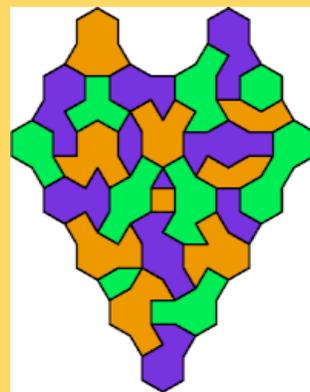
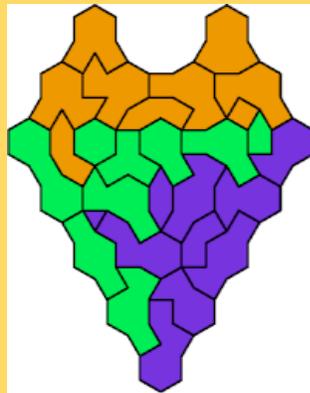
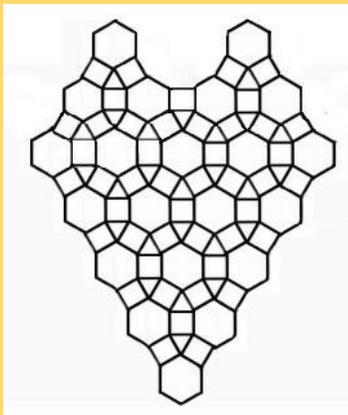
Trapezoids—*colors joined and separated.*



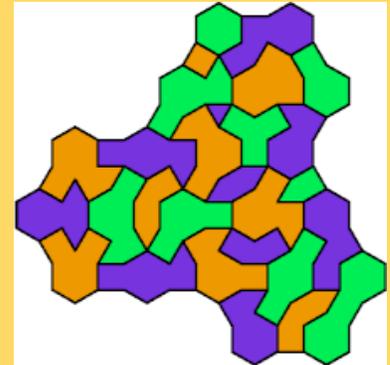
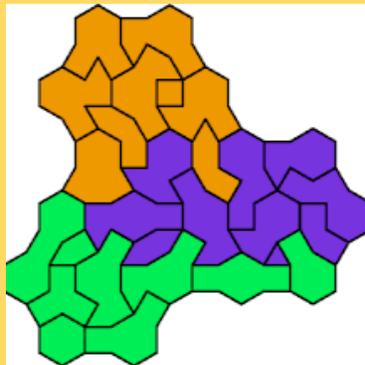
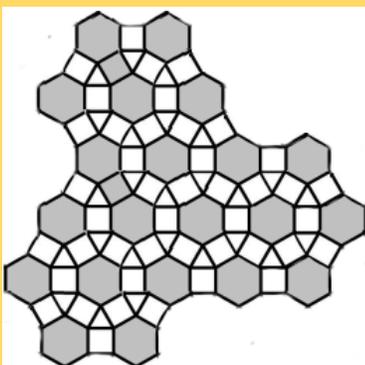
Parallelograms—*colors joined and apart.*



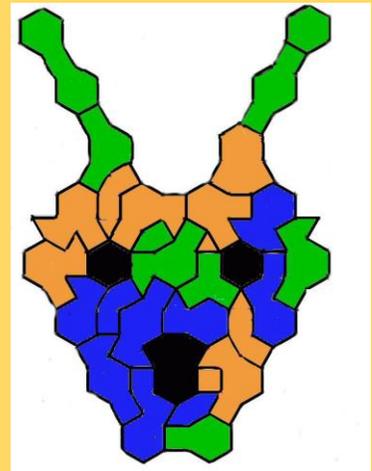
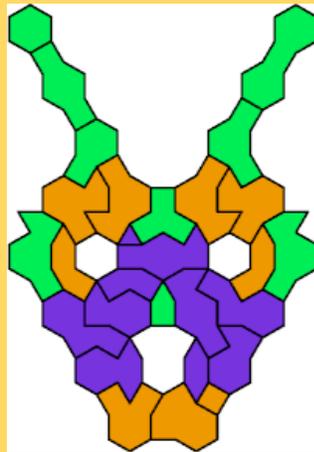
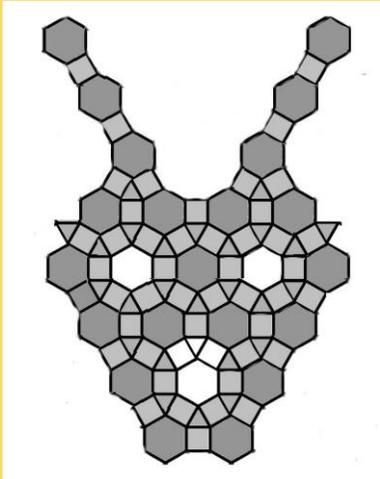
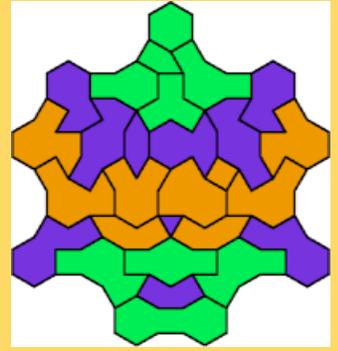
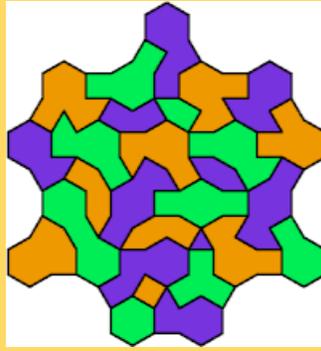
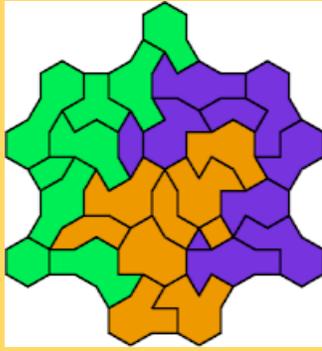
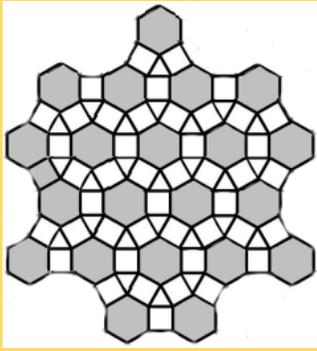
Hearts—*all and nothing matched.*



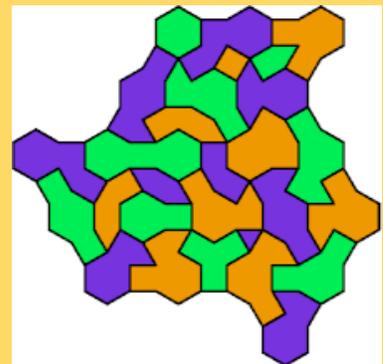
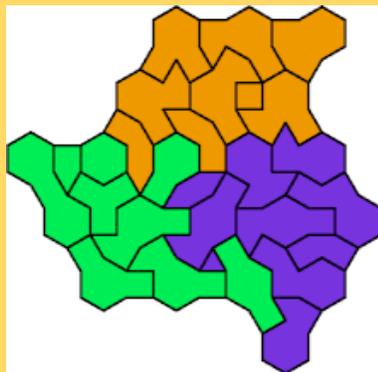
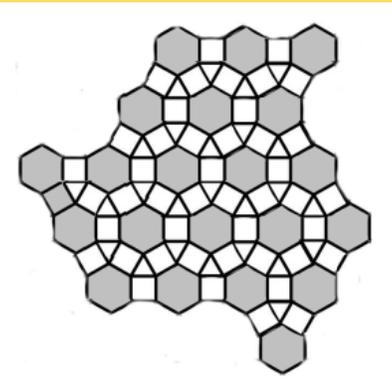
Flowers—*all and nothing joined, in three-fold rotational symmetry.*



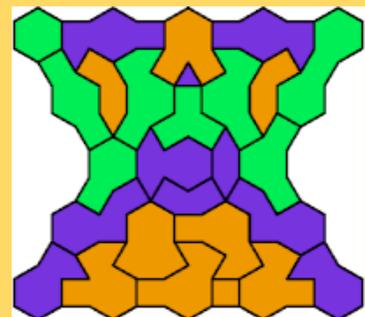
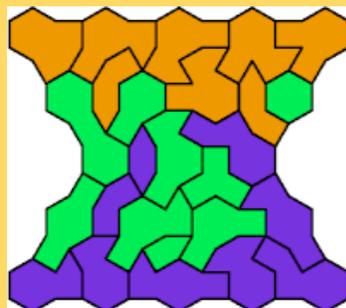
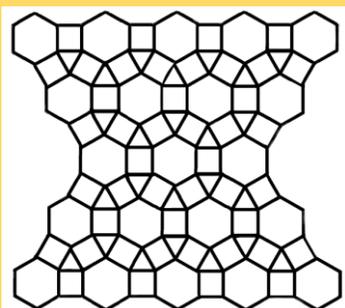
Tortoise and the Hare



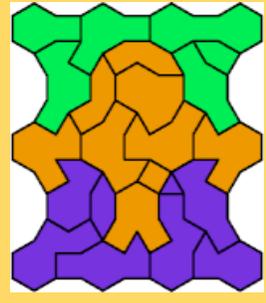
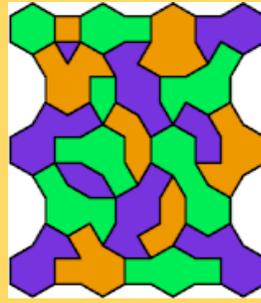
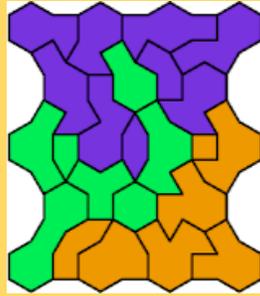
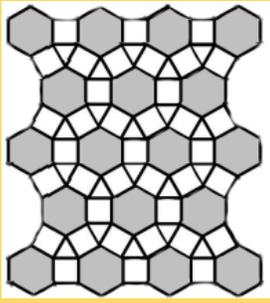
Pinwheels



Hourglass – omits the two smallest pieces



Barrels –all or nothing joined, and all-joined symmetry.



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