# Cookie Jar. 13 tasty triangle-trimmed hexagons 



# Color patterns Symmetry figures Strategy game 

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## INTRODUCTION

Cookie Jar was designed by Michael Dowle in England around 2014 as one of his series of combinatorial puzzles. Each set comprises a group of 13 tiles that are geometrically related and aesthetically different. Each set can be assembled inside a tray or "template" with rotational and mirror symmetry. Twelve of the tiles are symmetrical while the thirteenth is nonsymmetrical or "chiral". Cookie Jar is a trademark of Kadon Enterprises, Inc., and is produced under exclusive license from Michael Dowle.

Here is Cookie Jar's tray (left), a curvy-bordered star shape, and its associated grid (right) that the 13 tiles fill:



Michael's artistic touch was to create concave-contoured hexagons with curved sides combined with up to 6 convex-contoured triangular attachments with curved sides. There are, in total, 13 hexagons and 39 triangles. Here is the complete set of all-different combinations of hexagons with from 0 to 6 triangular attachments. The first group shows the construction and components of each tile indicated by grid lines. The second group shows the actual tiles without the grid lines.
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We colored the tiles according to the number of their triangular attachments. Tiles with 0 and 6 triangular attachments share a color, and those with 1 and 5 share another color. Three groups of three differently shaped tiles, each group having tiles with 2,3 or 4 triangular attachments respectively, were assigned their own colors.

The elegant challenge is to fill the tray so that any one of the 13 tiles occupies the center. All 13 solutions are possible. For extra challenge, we can ask whether solutions exist where no two tiles of the same color touch. (Point-to-point contact is allowed.) We have found two such solutions. One is on the back cover. Can you find another one?

On the following pages we present other figures for you to solve, outside the tray. These also have mirror or rotational symmetry. You are invited to design additional figures of your own. Send us photos of your best ones! Happy puzzling.

## Strategy games for two or three players

Last one wins - for three players.
Each player selects 4 pieces. The thirteenth tile is placed to cover the center of the tray. Take turns placing one tile at a time into the tray, fitting it against another tile or the border of the tray. The players' goal is to play out as many of their own tiles as possible. The last player able to place a tile wins. If all tiles are placed, everyone wins.


Last one loses - for two players.
Each player selects 6 tiles, with the 13th tile placed over the center of the tray. Take turns placing one tile at a time into the tray, fitting it against another tile already there or the border of the tray. Your goal is always to leave room for the other player to be able to add a tile. If the other player is not able to play, you lose. If all tiles fit, both players win.


## Puzzle figures

Fit the 13 tiles together to form the following figures. Watch carefully where the little rounded triangles go, as some figures differ at only a few positions. Black spaces are empty, not to be filled. The non-symmetrical tile may be placed either side up.


5


$7$






These three figures are attractive but not perfectly symmetrical:



## Lovely letters




We invite you to create and solve the remaining letters of the alphabet, using all the Cookie Jar tiles: F, G, H, P, Q, R, U, V. Send us your best designs: kadon@gamepuzzles.com Subject: Cookie Jar-alphabet


