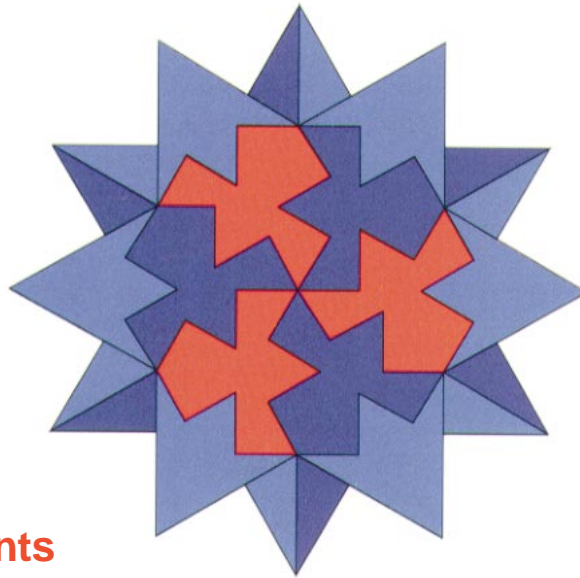


The Problem

The “supernova” star shown below is made up of 24 different shapes. Copy the figure and cut out the pieces. Reassemble the 24 pieces so that they form three smaller, congruent stars. Each of the small stars must be similar to the supernova star.



Strategies and Hints

1. Before solving the puzzle, you will need to copy the figure. Start by describing the outside of the supernova.
2. Are the 24 pieces all the same? all different? Describe the types of pieces that make up the supernova.
3. Try numbering the 24 pieces. Label all the triangles 1, all the arrowheads 2, and all the “head and shoulders” shapes 3. How many pieces will be in each of the three small stars? What will the number of those pieces be?
4. After you have made the three small stars, put the supernova back together—without looking at the diagram above!