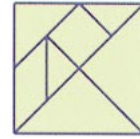


Circular Tangrams

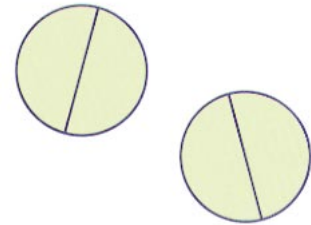
Problem-of-the-Week

The Problem

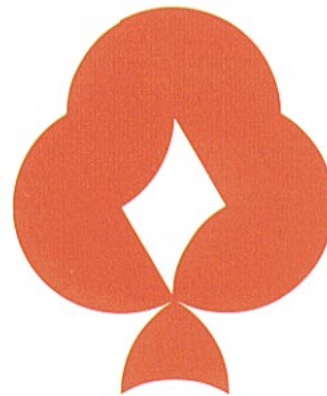
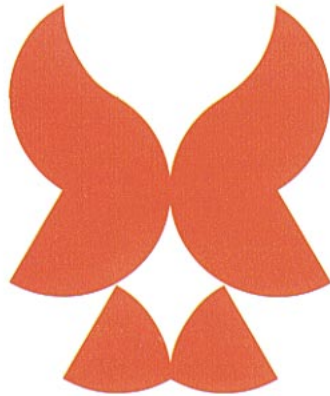
You are probably familiar with tangram puzzles. A square is cut into 7 different pieces as shown at the right. Then, the pieces of the square are used to create different shapes.



Circular tangrams also have 7 pieces. Two congruent circles are cut in a certain way to create the puzzle pieces. Each circle is first cut in half along a diameter. Then, 2 more cuts are made in one circle so that it has 5 parts.



Two designs made from circular tangrams are given. Figure out how to cut the second circle to create the 7 tangram pieces.



Strategies and Hints

1. Are the edges of the 3 designs mainly straight or mainly curved? What might this suggest about the 2 cuts needed in the second circle?
2. What clue is suggested by the “feet” on the first design? by the “stem” on the second design?
3. The figure at the right provides more clues.
4. After you have solved the problem, show how the two designs were created from the 7 pieces.

