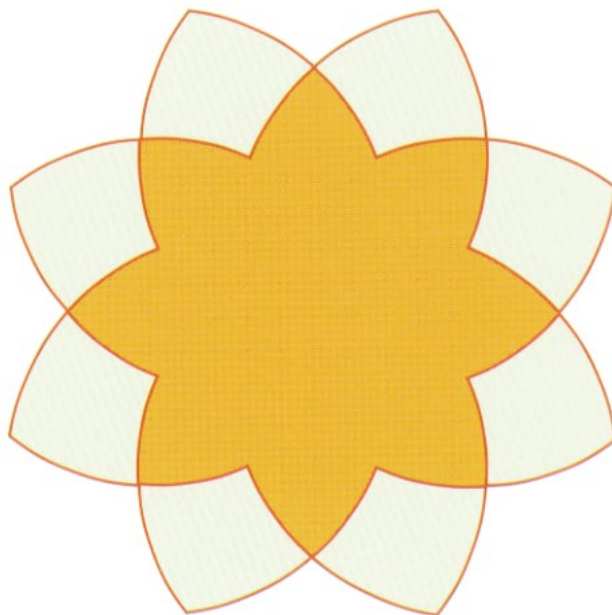


# An Eight-Point Star

## Problem-of-the-Week

### The Problem

This construction can be made using only a compass and a straightedge. Analyze the relationships among the arcs in the star and create the construction.



### Strategies and Hints

1. Concentrate on just one point of the star. Describe the four arcs that make up this figure.
2. How is the middle figure at the right related to the eight-point star?
3. Examine the bottom figure at the right. A right triangle has been drawn in one-quarter of the inner circle. How does the hypotenuse of this right triangle relate to the construction of the eight-point star?
4. Make a construction that shows *all* the circles that are used in the construction of the eight-point star.

