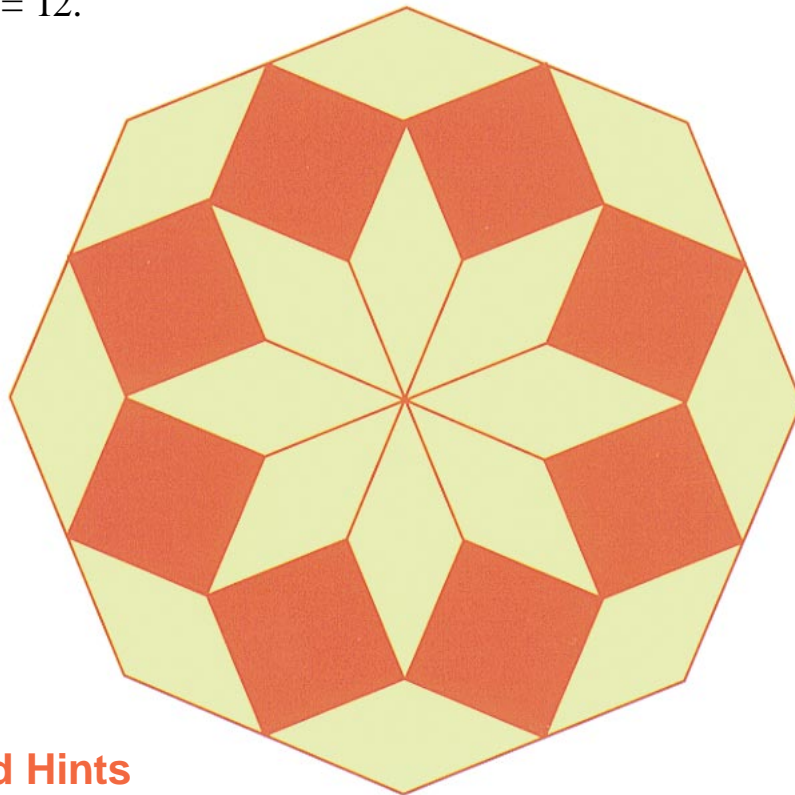


### The Problem

When  $n$  is an even number, a regular  $n$ -gon with sides of length  $s$  can be tessellated in a pattern of diamonds with sides of length  $0.5s$ . The number of diamonds equals  $n(0.5n - 1)$ .

The tessellation for  $n = 8$  is shown below. Find the tessellation for  $n = 12$ .



### Strategies and Hints

1. Describe the shapes and arrangement of the rhombi used in the tessellation of the octagon above.
2. How many rhombi will you need to tessellate the dodecagon?
3. The center of the tessellated dodecagon will be a star-shaped figure made of 12 rhombi. And, 12 of these shapes will form the border of the tessellation. What will be the angle measures of each of these rhombi?