Follow the directions on page 289 using Display 4.4.

Continue to rotate the top copy and make a list of all the angles between 0 degrees and 360 degrees for which the top copy matches the bottom one.

READ the first two paragraphs on page 290.

1. How many angles of rotation symmetry does a regular octagon have? What are they? Does it matter how large the octagon is?

How many angles of rotation symmetry does a regular hexagon have? What are they? Hint: Relate the number of vertices to the total number of degrees required to turn it all the way around. Where is its point of symmetry? Can you locate that point with a straightedge and a compass? If so, how?

2. How many angles of rotation symmetry does a regular pentagon have? What are they? What are they? Where is its point of symmetry? Can you locate that point with a straightedge and a compass? If so, how?