# Math 331, Spring 2005, Problem Set 8

26. Create a procedure that takes as input a positive integer and two real numbers a and b and produces as output (the list of points corresponding to) an n-gon centered at (a, b). Using this procedure, obtain a list of twenty decagons centered in $(0, 0), (1, 1), ..(20, 20)$

27. Create a procedure that takes a list of decagons and a linear transformation gives as output the result of applying the linear transformation to all the decagons. Rotate each of the decagons of the previous problem by an angle of $\pi/4$. Plot the decagons and their images in the same graph.

28. Create a procedure that takes a polygon and a **linear** transformation yields as output the result of applying the transformation to the polygon. Find the coordinates of the linear transformation that sends the blue (larger) square to the pink (smaller) square. Apply the transformation to the blue square. Test your result by plotting the two squares in the same graph.
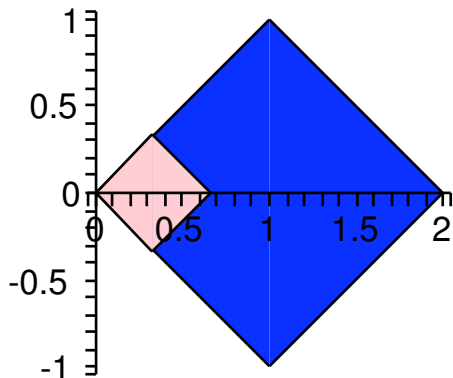
29. Compute perimeter and area of the snowflake