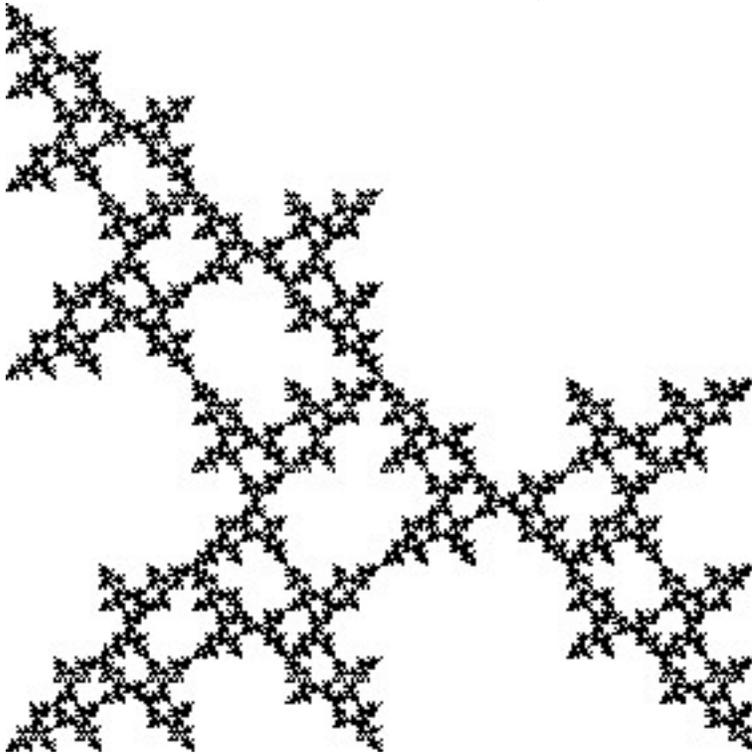


Math 331, Fall 2002: Problems 25-28

25. (*expires 12/13*) Construct a Cantor set whose box counting dimension is $1/2$. Explain a general algorithm for constructing a Cantor set with *any* given box dimension $0 < d < 1$. [*You can do this on Maple or by hand.*]
26. (*expires 12/13*) Write a TurtleCmd procedure that draws the n -th approximation of a fractal of your choice (not the one you're using for Project 3, and not the Koch curve!) and calculate its box-counting dimension.
27. (*expires 12/13*) [No Maple] Find the affine transformations that define the fractal below. For notes on affine transformations, download the Maple file: <http://www.math.sunysb.edu/~m>



28. (*expires 12/13*) Write an IFS procedure (see <http://www.math.sunysb.edu/~mat331/Worksheets>) to draw the n -th approximation of a fractal of your choice (not the one you're using for Project 3 and not Koch or Sierpinski) and compute its box-counting dimension.