ACCESS
Week 4 Assignment

Part I: Make a fractal:
   You may choose to reproduce one of the more interesting fractals from the class notes or the xeroxed book chapters, or better yet experiment and find a completely new one which you like. Create a Maple document which illustrates the process you went through to make the fractal, as well as the final picture. Include the generating functions and pictures of what they do geometrically, Write your accompanying explanations so that give a hint of the mathematics which underlies the construction process.

Part II: F ind a power law for our height-weight data, and compare it to the one derived from the national data, as well as to the body mass index:
   Using the height-weight data which we collected, try to find a power law which fits this data well. Use the example with national data as a template. Include pictures corresponding to the various steps, and text commentary explaining what you are doing.
   After completing the analysis with our data, compare your results to those from the national data. For example, create a plot which contains our ln-ln points, the least squares line for them, as well as one from the national data. Use this plot to discuss why the two slopes are not as close as you might have hoped for.
   Research the body mass index on the internet, to find out what is considered a "normal" body mass index. See how well the curve of "normal" heights and weights fits the national data and our own data. Can you make any conclusions about the appropriateness of B.M.I. for non-adults? (It is not considered an appropriate measure for children, as some of the internet sites explain.)

Due date:
   This project will be due by 4:30 p.m on Friday July 13. Rather than sending your project to me via email, please deliver hard copies to Irene Cervantes in the College of Science Offices, JTB 220. Well actually if you wait until Friday Irene won't be there, but someone else will know where the pile is. I will be out of town next week, but I'll be reading my email in case you have any questions. Have fun!