Applying Matlab

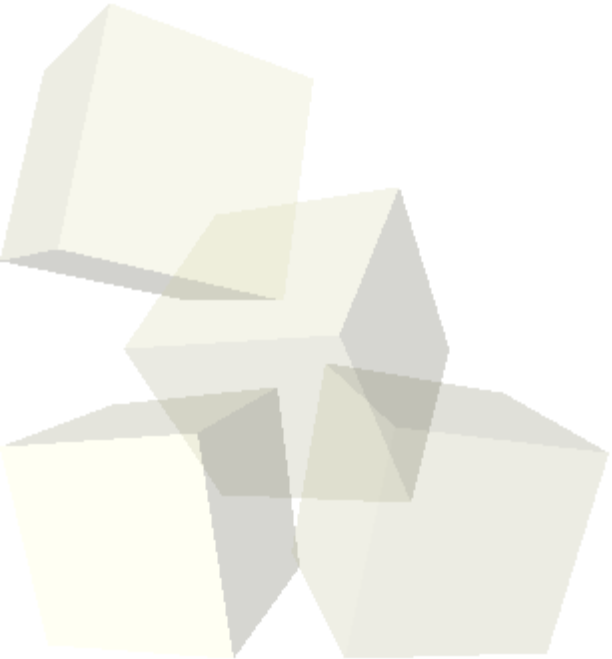
9-6-2006

Opening Discussion

- What did we talk about last class?
- Do you have any questions about the reading?

Sorting, Searching, and Size

- The sort function sorts arrays.
- The find function searches for things in them.
- The size and length functions tell you how big they are.



Relational and Logic Operations

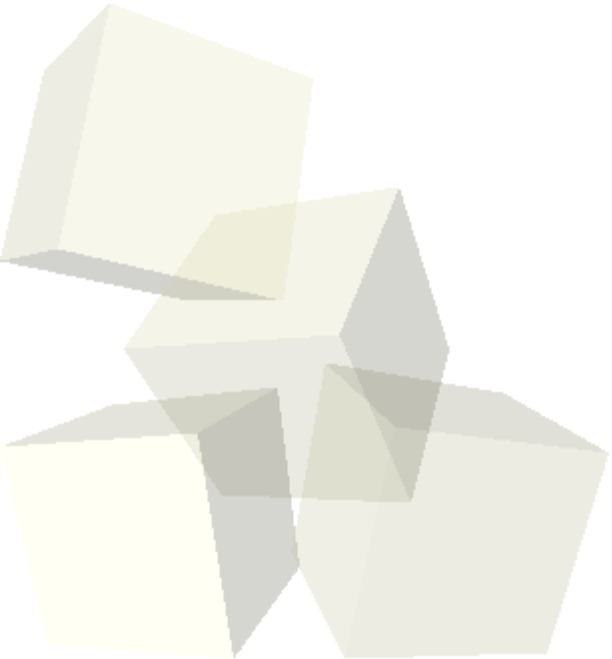
- Make an array with two rows. One row is integers from -5 to 5, the other is the square of those values.
- Now use a logical operation to make a new array that contains only the columns where the square is greater than 5.
- Now do the same type of thing but only get squares greater than 10 or less than 5.

Flow Control

- Write a few lines of code that will do Serpinski's triangle and put each now point in a single Nx2 array. Put 5000 points into it.
- You can plot that array with the following:
  - plot(data(:,1),data(:,2),'.')
- Now write a loop that will do a Mandelbrot check for a single point. Have it loop until z_n has a magnitude greater than 2 or you get through 100 iterations.

Functions

- Now make an m-file and put the code you wrote for the Mandelbrot into the m-file as a function that takes a point and returns how many iterations it went.
- Lets close out the class trying to write code that will plot up a full Mandelbrot set for us.

Closing Comments

- Assignment #2 is due on Friday.