



Applying Matlab 2

2/1/2008





Opening Discussion

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



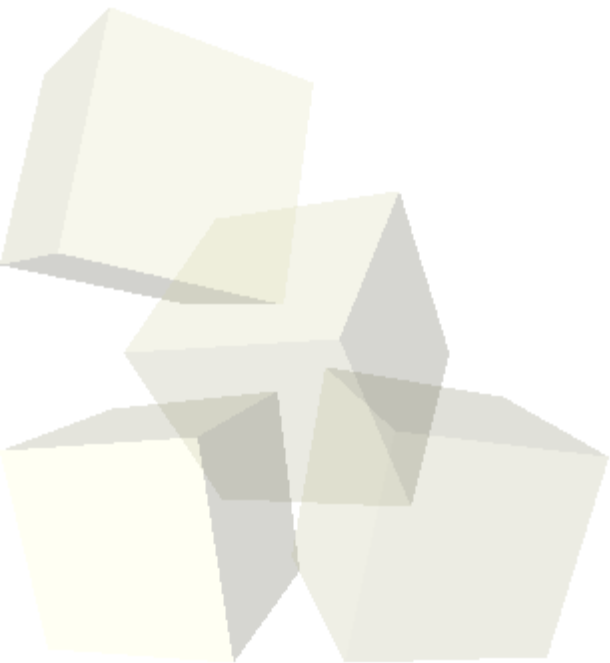


- Matlab functions are a bit different from what you are used to in other languages. They can take a variable number of arguments and return a variable number of arguments.
- To return a value, we set a variable with the name specified on the first line of the function to the value we want to return. That is what will be returned when the function terminates.
- You can also have local functions or nested functions. When either of these is used the main function must be terminated with end.
- Function handles are also discussed in the book and they are worth noting.



Writing a Function

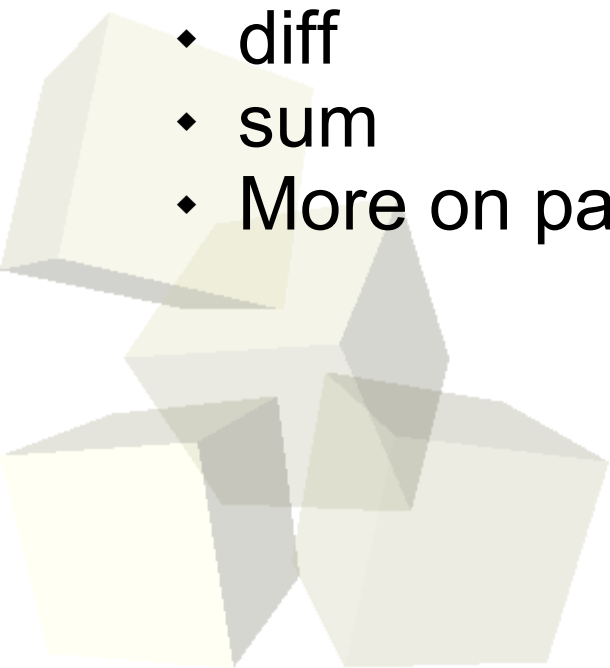
- We have our Matlab code to do the iteration for a single pixel of the mandelbrot set. Now make an m-file and put that code into the m-file as a function that takes a point and returns how many iterations it went.
- Let's try to write code that will plot up a full Mandelbrot set for us.





Basic Stat Analysis

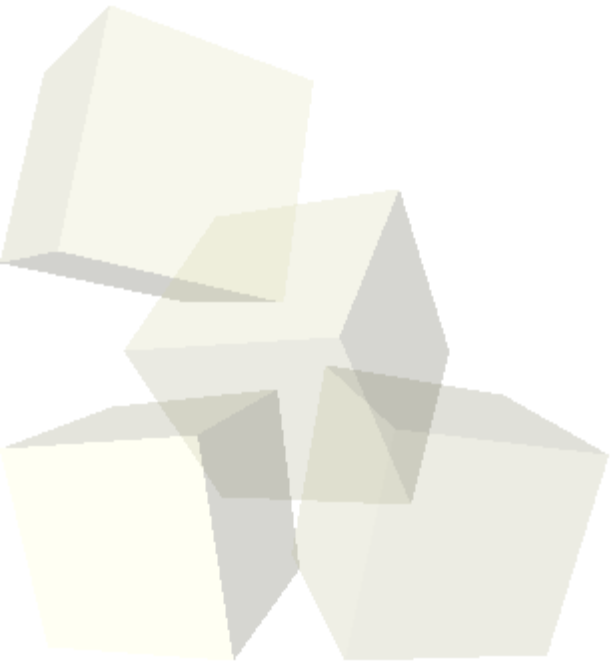
- As you have already experienced, Matlab has a set of statistical analysis methods.
 - ◆ mean
 - ◆ max
 - ◆ min
 - ◆ std
 - ◆ cov – covariance
 - ◆ corrcoef – correlation coefficients
 - ◆ diff
 - ◆ sum
 - ◆ More on page 309

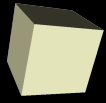




Basic Data Analysis

- Matlab also provides filtering functions that combine elements in arrays in various ways that you can specify.
- The filter function does linear combinations of elements in an array.





Closing Remarks

- It's a while before we have anything due.
- Do you feel that we are going at a pace that you can keep up with?

