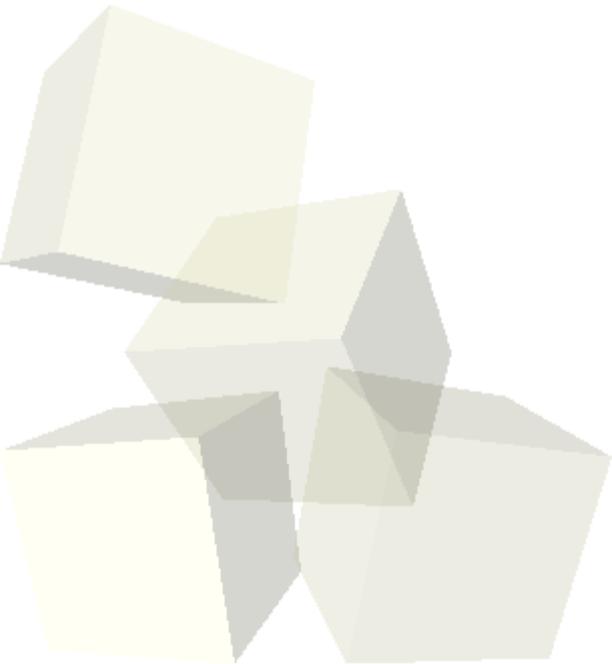
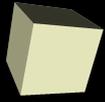


Stats, 2-D Arrays, and Data Types

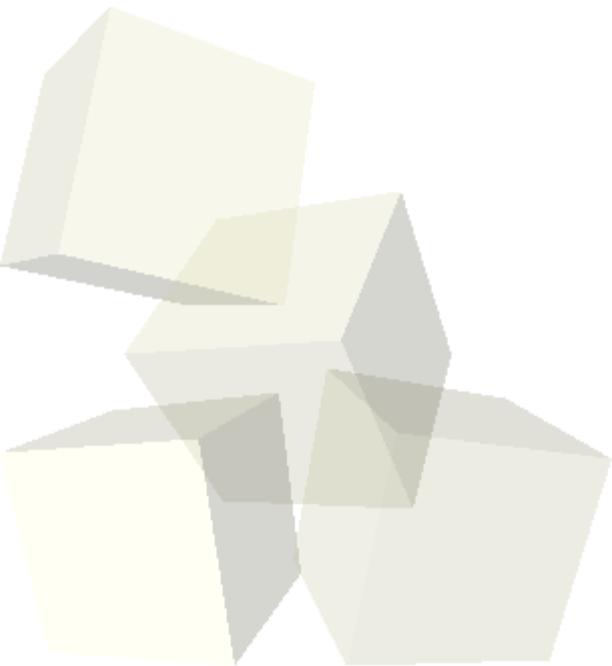
2/4/2008

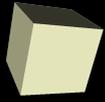




Opening Discussion

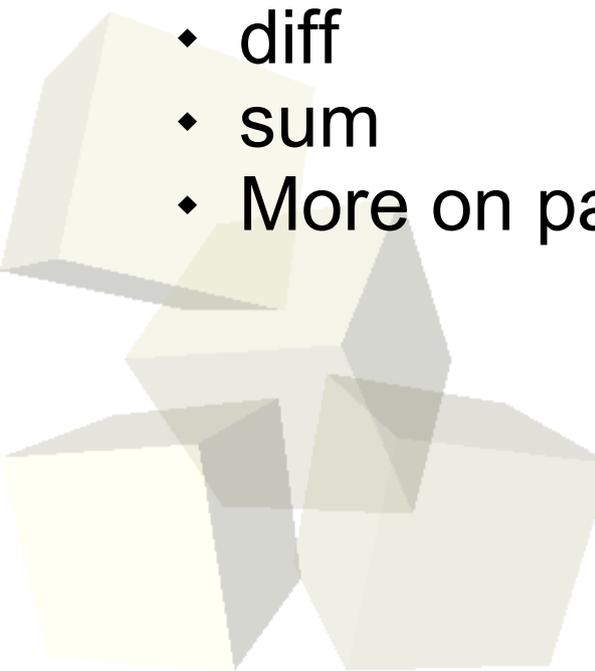
- What did we talk about last class?
- Do you have any questions about the reading?
- Let's quickly write our Mandelbrot function that uses meshgrid and does things the “Matlab way”.





Basic Stat Analysis

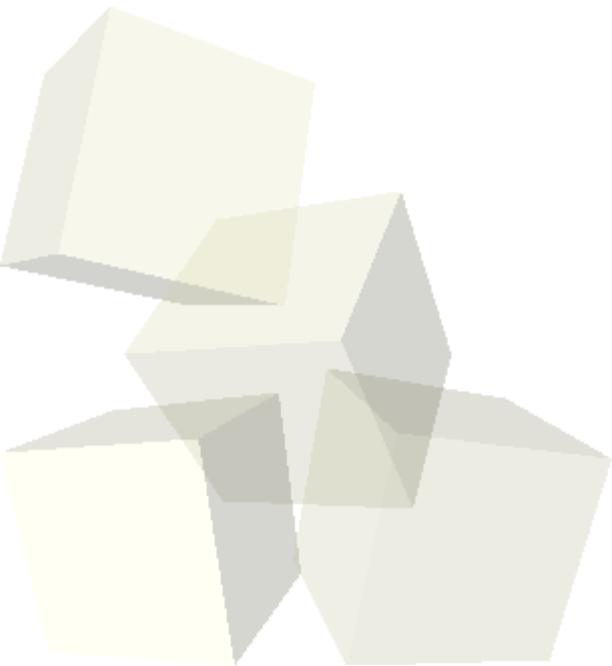
- As you have already experienced, Matlab has a set of statistical analysis methods.
 - ◆ mean
 - ◆ max
 - ◆ min
 - ◆ std
 - ◆ cov – covariance
 - ◆ corrcoef – correlation coefficients
 - ◆ diff
 - ◆ sum
 - ◆ More on page 309





Basic Data Analysis

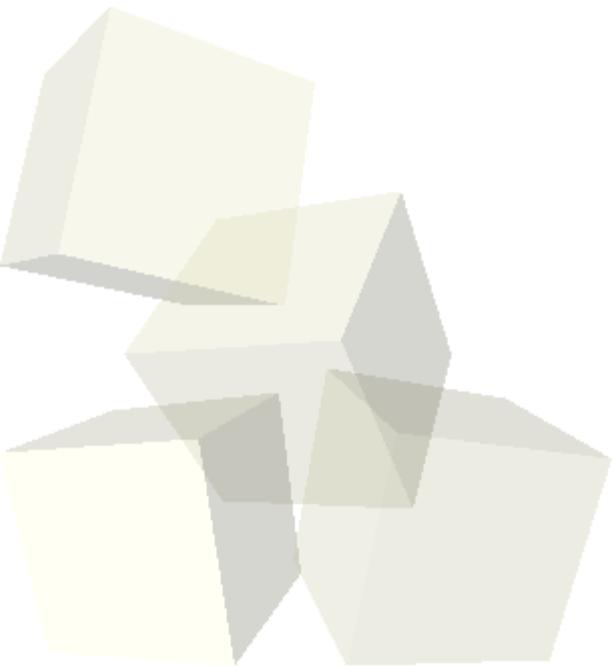
- Matlab also provides filtering functions that combine elements in arrays in various ways that you can specify.
- The filter function does linear combinations of elements in an array.





Multidimensional Arrays

- Arrays in Matlab can have more than 2 dimensions to them.
- We aren't going to deal with these much in this course and your book doesn't really deal with them outside of this one chapter either.





Numeric Data Types

- By default, everything in Matlab is a double. However, you can force things to be other types.
- Integer types can be signed or unsigned with 8, 16, 32, or 64 bits. When you construct an array with one of the construction methods, you can pass in a string giving the integer type. The class function lets you see the type of something that you have.
- You can also do a casting like operation to make something a particular type.
- If you want, there are also single precision floating point numbers.



Closing Comments

- See you on Wednesday.

