2-19-2010
Opening Discussion

- What did we talk about last class?
- Do you have any questions about the readings?
- Mandelbrot zoom movie.
Do you have any data that we could look at and do analysis on either with fitting or signal processing?
\[ e^{ix} = \cos(x) + i\sin(x) \]
Last time we played with the FFT using the temperature data.

We found some interesting differences in how we pre-treat the data to get a power of 2. We should explore the reason behind that.

I also want us to find the real frequency of the two spikes that the FFT found.
Matlab has several functions for doing numerical integration.
- `trapz` uses the trapezoid rule on data
- `cumtrapz` also uses the trapezoid rule, but as a cumulative integral on data
- `quad` and `quadl` do quadrature on a function (Simpson's rule with variable interval sizes.)
- `dblquad` can be used to do 2-D integration on a function.
- `triplequad` does 3-D integration of functions.
Assignment #4 is due on Monday.