ECE 312 HW #7

This a MATLAB exercise due on Wednesday, March 14.

A signal *x*(*t*) consists of two complex exponentials with frequencies  and . This signal is sampled at 50 Hz.

1. Take *N*=10 samples and zero pad the signal to 512 points. Compute the DFT and plot .
2. Repeat for *N*=15.
3. Repeat for *N*=30.
4. Repeat for *N*=100.
5. Explain why the two exponentials could not be resolved until *N*=30.