EE322 Fall 08 Homework Problem Set 41 (PS41)

Be sure to show your work.

1. (Chapter 12-related problem). Suppose x(t) = sinc(t/1000). Plot the magnitude and phase of the Fourier transform of x(t). Now impulse sample x(t) with a sample period of 100 μsec, and call this signal $x_\delta(t)$. Plot the magnitude of the Fourier transform of this impulse sampled signal. Describe the ideal frequency filter that could be used to recover the original signal x(t) if you were only provided with $x_\delta(t)$

1. Text, Problem 14-7 a, d, e.

2. Text, Problem 14-8 a, b.

3. Text, Problem 14-9 b, c.