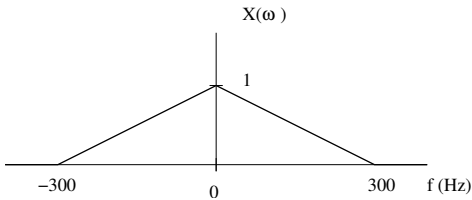


EE 342 – Homework 2

Due Feb. 2, 2005

1. The figure below shows the Fourier transform of a continuous-time signal $x_c(t)$.



This signal is sampled at 400 Hz to generate the discrete-time signal $x_d[n]$.

Plot the Fourier transform of the discrete-time signal $x_d[n]$. Include the frequencies from -4π to 4π . Indicate any frequency ranges which may have been corrupted by aliasing.

2. Problem 8.5
3. Problem 8.6
4. Problem 8.8 (a) (b) (d)
5. Problem 8.10 (a) (b) (c) (e) (g). Plot $x(t)$ using MATLAB.
6. Problem 8.11 (a) (b) (c) (e). Use the MATLAB `impz` function. The plots should look the same as for Problem 8.10.
7. Problem 8.12 (a) (b) (c) (d) (e). You do not need to compute the partial fractions analytically; just use MATLAB. Also, plot $x(t)$ using MATLAB.
8. Problem 8.13 (a) (b) (c) (d) (e)