EE 451: Homework 6

1. #7.21 from textbook

2. #7.23 from textbook

3. #7.24 from textbook

4. Given
$$x(n) = \cos \omega_0 n + \cos \omega_1 n + \cos \omega_2 n$$
where $\omega_0 = 0.2\pi$, $\omega_1 = 0.22\pi$, $\omega_2 = 0.6\pi$, and $x(n)$ has a limited duration of L. Use the `fft` command in MATLAB with $N = 2048$ to plot the magnitude spectrum of $x(n)$ with $L = 25$, 50, and 100 using

   (a) a rectangular window, and

   (b) a Hamming window.