# ECE 301: Homework 6

Due July 28, 2015

## Problem 1

Page 631, Problem 8.22

## Problem 2

Page 633, Problem 8.25

## Problem 3

Find and plot the CTFT of $y(t) = \sum_{k=-\infty}^{\infty} \delta(t - \pi k)$.

## Problem 4

Let $x(t) = \frac{sin(t/2)}{\pi t}$, $p(t) = \sum_{k=-\infty}^{\infty} \delta(t - \frac{\pi}{2}k)$, and $y(t) = x(t)p(t)$.

### Part a:

Plot $y(t)$ for $-\frac{3}{2}\pi < t < \frac{3}{2}\pi$.

### Part b:

Find and plot $Y(j\omega)$.

## Problem 5

Page 561, Problem 7.21(a,b,f,g)

## Problem 6

Page 561, Problem 7.22

## Problem 7

Page 566, Problem 7.29

## Problem 8

Page 567, Problem 7.31