EE 446: Homework 3

1. Solve the following Problems from the textbook.

   (a) 3.1

   (b) 3.3

   (c) 3.11

2. Using Matlab

   (a) generate a signal given by

   $$x(t) = \cos(2\pi f_0 t) \tag{1}$$

   where $f_0 = 1\text{kHz}$,

   (b) compute the analytic signal x_p, and

   (c) use FFT to show the spectrum of $x(t)$ and $x_p(t)$ (make sure you label the axis correctly with the x-axis being in Hz).