University of Waterloo
MATH 213, Spring 2015
Assignment 8

Question 1

Find the Fourier series of the following function, given over one period, using two methods: real and complex form.

$$x^2 \text{ on } (-\pi, \pi)$$

Question 2

Derive the Fourier integral representation of the following function.

$$f(x) = \begin{cases} e^{2x} & 0 \leq x < L \\ 0 & x < 0, x \geq L \end{cases}$$