

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 301 – Term 172 – Quiz 4

Name:

Student ID #:

Section #:

Question 1. Find the Fourier series of

$$f(x) = \begin{cases} 0 & -2 < x < 0 \\ x & 0 \leq x < 1 \\ 1 & 1 \leq x < 2 \end{cases}$$

Question 2. Put the following equation in self-adjoint form and find the weight function.

$$y'' - 2xy' + 2ny = 0$$