Quiz 9

Name: A#:

Problem 1. Exercise 20.4b (10 points) Compute the general solution of the following Euler equation.

$$x^3\ y''' + 2\ x^2\ y'' + x\ y' - y = 0$$

Solution:

Problem 2. Exercise 21.12 (10 points) Comsoder the following nonhomogeneous linear differential equation.

$$y^{(4)} + y'' = 1$$

a. Verify that one particular solution to this equation is

$$y_p(x) = \frac{1}{2} \, x^2$$

b. Find the general solution of the differential equation.

Solution: