

QUIZ#4 Math202-sec8.Net Time Allowed: 35 minutes

Name:

ID #:

Serial #:

**Exercise1:**(04 points)

Find the recurrence relation determining the coefficients of the power series solution for the (DE):  $y'' - xy' + 3y = 0$ .

**Exercise2:**(06 points)

Solve the homogeneous system:

$$\begin{cases} \frac{dx}{dt} = y + z \\ \frac{dy}{dt} = 2x + y \\ \frac{dz}{dt} = -z \end{cases} \quad (1)$$