TA: R McDougal

Math 415

Name: _____

Quiz IV

Answer each question as completely as you can; remember you must show *all work* for full credit. You may not consult books, notes, or each other for this quiz. Good luck!

Consider the differential equation

$$(1 - x)y'' + y = 0. \tag{1}$$

1. Find the recurrence relation for the coefficients of the power series solution of (1) about the point $x_0 = 0$. (6 points)

2. Find the first four terms in each of two linearly independent solutions. (4 points)