Math 216 - Quiz 7

Name _____

November 10, 2010

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (5 points) Solve the following initial value problem:

$$x^2 y'' - (x^2 + 2x)y' + (x + 2)y = 0; \quad y(1) = 1,\ y'(1) = 2$$

(Hint: Find one solution by guessing and checking.)

2. (5 points) Use variation of parameters to solve the following equation:

$$y'' + 2y' + y = e^{-x} \ln x$$