Math 202-Section 15 Quiz 5

Sr. Num.: ID. Num.: Name:

Q 1: Given that

$$y = \frac{c_1}{x} + \frac{1}{15}x^2 - \frac{1}{6}$$

is a one-family solutions of the nonhomogeneous differential equation

$$2x^{2}\frac{d^{2}y}{dx^{2}} + 5x\frac{dy}{dx} + y = x^{2} - x.$$

 \bullet (2 points) Find a particular solution of the DE.

• (6 points) Find the complementary solution for the DE.

 \bullet (2 points) Find the general solution of the DE.