KFUPM/ Department of Mathematics & Statistics/ 152/ MATH 202-15/ Quiz 2/

Name: ID #: Serial #: 1. [8pts] Given that $y_1 = x$ is a solution of $y'' - \frac{4x}{1+2x^2}y' + \frac{4}{1+2x^2}y = 0$, find a second solution y_2 of the DE and write down the general solution.

2. [8pts] The DE $x^2y'' - xy' + y = x^3 + 2$ has as particular solution a polynomial of degree 3. Find this particular solution and write down the general solution of the DE.