

Math 324 Exam 1

8 January 2016

Name:

1. Find the general solution to $x^2y'' - 5xy' + 9y = x^3$.

2. Find the general solution to $y' + e^x y = 3e^x$.

3. Find the general solution to $y'' - 3y' + 2y = x^2$.

4. Given that $\phi_1(x) = e^{x^2}$ is a solution to $y'' - 4xy' + (4x^2 - 2)y = 0$, find the general solution.