

Department of Mathematics and Statistics

Quiz No. 5

Math202, A First Course in Differential Equations, Sem112

Section:

Name:

ID:

Problem 1.(2 points.) Determine the singular points of the differential equation
 $(x^3 - 9x)y'' - 5xy' + 6y = 0$.

Problem 2.(3 points.) Classify at least **two** of the singular points obtained in question **1** as being regular singular points or otherwise.

Problem 3.(3 points.) $x=0$ is a regular singular point of the differential equation
 $2x^2y'' + 3xy' + (2x - 1)y = 0$. Find roots of the indicial equation and show that the roots do not differ by an integer.