McGill University Math 325A: Differential Equations

Assignment 8: due Thursday, November 30, 2000

For each of the following differential equations show that x=0 is a regular singular point. Also, find the indicial equation and the general solution using the Frobenius method.

1.
$$9x^2y'' + 9xy' + (9x - 1)y = 0$$
.

2.
$$xy'' + (1-x)y' + y = 0$$
.