

July 29, 2015
Math 201, Tutorial 9

For the following differential equations,

- 1) find the singular points if they exist;
- 2) find the **first three non-zero terms** (or as many as possible if there are less) of each of two linearly independent solutions of a power series solution **centred at 0**;
- 3) find the radius of convergence of your solution.
 - a) $2y'' + xy' + 3y = 0$
 - b) $(1 + x^2)y'' - 4xy' + 6y = 0$