

## SERIES PRACTICE

Name: \_\_\_\_\_

For each of the following initial value problems, assume that there is solution  $y$  that has a power series representation. Find values for the first few coefficients; then rewrite the power series in sigma notation in order to recognize it as a combination of elementary functions. Check your answers!

(a)  $(x - 2)y' + y = 0, y(0) = 3$

(b)  $y' + 2xy = 0, y(0) = 2$

(c)  $y'' + 9y = 0, y(0) = 1, y'(0) = 1$