MAT176, Spring 2019 **Renato Ghini Bettiol**

Homework Set 11

DUE: MAY 6, 2019 (AT THE BEGINNING OF CLASS)

To be handed in

Please write your solution to Problem 1 on a single sheet of paper!

1. Use the series expansion $y(x) = \sum_{n=0}^{+\infty} a_n x^n$ to solve the Initial Value Problem:

$$\begin{cases} y' + xy = 0 \\ y(0) = 1 \end{cases}$$

   Which function does the power series you obtained represent?

2. Textbook (5th edition) Section 9.9, Exercises 5-8, 15-16, 18-20

3. Textbook (5th edition) Section 9.10, Exercises 27-37, 63-66