

## MAP 2302 WRITTEN HOMEWORK #8

Due Monday October 21st, in Canvas

**Question 1.** Find the first three nonzero terms in the Taylor series for the solution to the initial value problem.

$$y' = y^2, \quad y(0) = 1$$

**Question 2.** Consider the following initial value problem.

$$y' = x + y, \quad y(0) = 0$$

- (a) Find the solution in the form of an infinite series.
- (b) Find an exact formula for the solution using techniques from earlier in the course.