

## MAP 2302 WRITTEN HOMEWORK #9

Due Monday October 28th, in Canvas

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

$$y'' = -\cos y, \quad y(0) = 0, \quad y'(0) = 1$$

**Question 2.** Find the first six nonzero terms in the Taylor series for a general solution to the differential equation.

$$y'' + xy' + y = 0$$