

Numerical Analysis- ME 542

Assignment-6

March 26, 2021.

Instructions

1. Solve the following ODE with $y(0) = 1$ using Euler method with step size $h = 0.1$. Make a table to compare the results with the same obtained analytically. Consider two perturbed initial conditions $y(0) = 0.99$ and $y(0) = 1.01$ and solve numerically with same step size. Tabulate the same with the earlier results. What do you think?

$$y' = -100y + 100t + 101$$