

MATH 371-02 (192)
MATLAB # 6
Due April 2, 2020

Write a MATLAB code to implement Algorithm 5.2 (Runge-Kutta method of order four). Use the code to approximate the solutions to the following initial-value problem, and compare the results to the actual value.

$$y' = e^{ty}, \quad 0 \leq t \leq 1, \quad y(0) = 1 \text{ with } h = 0.25$$

actual solution $y(t) = \ln(e^t + e - 1)$