

Submit a published pdf of your script solving the following problem to Canvas by Monday, September 28 at 11:59 p.m. See the 2460 webpage for formatting guidelines.

Consider the initial value problem

$$y' = y^2 \cos\left(\left(t + \frac{1}{2}y\right)\pi\right), \quad y(1) = 1.$$

- (a) Modify your Euler's method code to solve this IVP with time-steps $h = 0.1$, $h = 0.05$, $h = 0.01$, and $h = 0.001$ over the interval $t = [1, 17]$.
- (b) Plot *all* these solutions **on a single plot**. Be sure to label the axes, title the plot, and provide a legend distinguishing the solution curves by step-size.

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