

Submit your Jupyter notebook with the answers to gradescope by 10:50am.

Consider the application of Euler's method to

$$y' = -33y, \quad y(0) = 1.$$

1. What is a good choice for the step size if we want to compute  $y(1)$  with three decimal places of accuracy? Justify your answer.
2. Considering the long term behavior of the solution, what is the condition on the step size for Euler's method to converge?