

q1. (5 pts) wrt eulers method, briefly describe the relationship between stepsize h (ie, Δx) and number of steps n across interval $[a,b]$ and error expectations.

q2. (5 pts) wrt to trapezoid method, briefly describe the relationship between stepsize h (ie, Δx) and number of steps n across interval $[a,b]$ and error expectations.

q3. (10 pts **MATH 685 ONLY**) $f'(x) = y'(x) = \text{some rate of change}$ can have multiple solutions. briefly explain why specification of an interval (ie, $[a,b]$) and providing an initial value result in a unique solution.

q4. (24 pts) bc these metrics are also important.

- a) when is the final due?
- b) will late submission be allowed for the final?
- c) when is the last date for submitting all other coursework?
- d) will late submission be allowed for that coursework?
- e) what about if there are department lectures given after that final coursework due date?
- f) if so, when is the due date for those?
- g) if you attend in person a math colloquium, what bonus can you expect?
- h) what must you do if you attend a math colloquium in person?
- i) do you need to write up a summary for a math colloquium attended in person?
- j) if you attend more math colloquiums than required, what bonus can you expect?
- k) when and how can you expect your current academic standing wrt this course?
- l) what should you do and when if you do not receive that notice?

q5. (6 pts, for roundness) math is a logical language and python (et, al) is a logical language. what is the gap between the two?