nmi : spring 2024 : quiz 07 : ODEs, IVPs, details details details

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

q3. (10 pts **MATH 685 ONLY**) *f'(x) = y'(x) = 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.

1. when is the final due?
2. will late submission be allowed for the final?
3. when is the last date for submitting all other coursework?
4. will late submission be allowed for that coursework?
5. what about if there are department lectures given after that final coursework due date?
6. if so, when is the due date for those?
7. if you attend in person a math colloquium, what bonus can you expect?
8. what must you do if you attend a math colloquium in person?
9. do you need to write up a summary for a math colloquium attended in person?
10. if you attend more math colloquiums than required, what bonus can you expect?
11. when and how can you expect your current academic standing wrt this course?
12. 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?