

Homework 12

Math 469, Spring 2024

This homework is due on Friday, April 19 at 11:30 am. (Turn in your answers – via Gradescope – to questions 1–4.)

1. Suggest a final-exam problem related to ODEs.
2. Section 5.13 #10, 11, 12
3. Read the first few pages of Chapter 13 (“Flow”) from *Writing Science* (Schimel), provided in class (and available online via the TAMU library). Did anything in the chapter surprise you? Explain briefly.
4. (This part of your homework pertains to your final project) *You may write this together with your project partner.*
 - (i) Review all comments you received on the draft of your final paper.
 - (ii) Revise your draft, so that it takes into consideration all comments you received, and also does all of the following:
 - (a) describe the scientific/mathematical background,
 - (b) state the main scientific/mathematical questions addressed in the paper,
 - (c) describe the authors’ objectives and what they do to achieve them,
 - (d) state at least one main mathematical result (together with all necessary definitions) – *this is a statement, not a description*,
 - (e) interpret the significance of the result in terms of the authors’ objectives,
 - (f) explain the scientific/mathematical conclusions the authors reached,
 - (g) **extend the results in the paper and/or critique some scientific or mathematical aspect of the paper**, and
 - (h) include a complete **citation to the article** you are analyzing (title, authors, etc.)
 - (iii) SUBMISSION - PART 1. You or your partner must upload the draft to Gradescope (the draft must include your name and your partner’s name). If your partner turns in the draft, state this clearly in your Gradescope submission.
 - (iv) SUBMISSION - PART 2. *Please print 1 copy of your draft, and submit it in class on Friday, April 19.*

Announcement:

The Final Exam will cover *differential equations* (topics from Sections 4.1–4.8 and 5.1–5.7) and (like on the midterm exam) will ask you to **analyze an excerpt of a published math-bio article**. (Details to come.)