

## MATH 2B: Applied Linear Algebra

Class 13: Tuesday 5/18/2021 (Week 7)

In-Class Meeting: 1:30PM – 3:45PM

## TODAY'S PLAN:

1. I have updated links on our [course homepage](#) for an open source textbook and aligned content for each lesson. Please take a look at those resources to help you learn!
2. Draft 1 of Quiz 2 on Lessons 4 - 11 is due one week from today on Tuesday 5/25/2021 at 11:59pm. This week, I'm hoping to support you in making progress on your work.
3. One of our class mates found some errors in problems 6, 7, 8, and 10. The errors had to do with the problem numbers listed in these problem statements. [Here](#) is an updated version of the quiz where these errors should be corrected. I've also updated the blank quiz 2 file on our course homepage.

## IN-CLASS JOURNAL ENTRY:

1. Where are you in your quiz 2 workflow?
  - a. Have you started?
  - b. If you haven't started, what are you doing to prepare?
  - c. If you have started, which problems have you started working on?
  - d. Which problems do you think you've solved?
  - e. Which problems are you stuck on (or might need some help with)?
2. What are the next to-do items that you need to finish?
3. Please create a plan for yourself for the coming week to make progress towards your goal?
4. What type of help/support might you need to make progress over the coming week?

## Room 1: 2PM

### Sulphine

- I have started the quiz. I finished problem 1, but I don't think it's correct so I will have to go over it again. I want to finish questions 1-4 by Wednesday. I have trouble with figuring out how to use the lessons into the questions, and mainly just finding where to start. But my group has been helpful with that.
- I still need to finish my quiz 1 second draft and the last two videos of lesson 11.
- I plan on finishing the lesson 11 notes and questions 1-2 today. On Wednesday I want to finish questions 3-4. Thursday, I will do questions 5-6. Friday, questions 7-8. Saturday and Sunday questions 9-10 and review the questions hopefully with my group outside of class.
- I think I may need to talk with my group on how to go about the questions. I don't think the actual computations are a problem, but rather what concepts are best for each question. Talking with my group last week really helped me, so I hope to do so again today and Thursday.

### Binbin

- I have started. I have finished 1-9, but I need to go back to review them. For question 10, I am confused with the second part. What is problem 5 and problem 6 referred to in the question? After I finish all the questions, I will go back to see if my words and explanation are clear enough. And I am not sure if some part of concepts need a detailed explanation like multivariable chain rule. I understand why we do that, but I don't know how to explain.

### Jessica

- Yes, I've started. I have completed problem 1 and am working on 2-4 first before 5-10. I think questions 5-10 will be challenging, as lesson 11 has the hardest concepts yet (for me, at least). Communicating with my group may help with the progress throughout the week.

### Emma Foss

- 1. a. I have not started. B. I need to go back over the course material but haven't had the motivation/energy.
2. Next to-do items are, everything really, quiz 1 corrections, course material for this week, and quiz 2.
3. My plan for this week is to get my microscopy work to a place where I can put it away and work on other things. When the deadline is closer, I'll have an easier time starting.
4. I dunno



## Room 2: Math Wizzes

### Georgio

1. I will start working on the quiz today, and hopefully finish it by the end of week.
2. After the quiz, I need to work on lesson 12.
3. For the coming week, we as a group will work on the quiz + Lesson 12.
4. In terms of help, I think we're doing a great job as a group to explain to each other concepts that we might need better understanding on, other than that we might reach out to Jeff as our last source of help.

### Brandon

- I will start to work on the quiz today. I just finished up most of my midterms, so I can focus on the quiz. I think now that we know what to expect for each quiz to look like, we can aim for more greens than before.

## Room 3: #FlonkertonGang

### Will Tholke –

- 1) In regards to the progress I've made on Quiz 2, I've completed problems 1 through 9 and am halfway done with problem 10. According to the timer I've been using to track my study time, I've spent upwards of 12 hours on the quiz so far.
  - a) I've started!
  - b) N/A
  - c) I've worked on problems 1 through 9
  - d) I believe that I've solved problems 1 through 9
  - e) I'm currently not stuck on any problems, although I could use some help reviewing my verbal representations (pertaining to the verbal, graphical, and symbolic representations model) of how the area of the parallelogram formed by QR, PR, and point P will be the magnitude of the cross product of QR and PR (in question 3). I believe my final answer to be correct, but my work can still use some improvements.
- 2) On my to-do list for the week of Monday, May 17th to Friday, May 21st are the following items:
  - a) Complete question 10 on Quiz 2
  - b) Review my lecture notes for lectures 12-14 (spaced repetition over the course of the following 3 days)
  - c) Preview Lesson 1 (Intro to Numerical Analysis) and begin taking notes on lessons 1.1 through 1.6 [19 lessons in total]
  - d) Cross-check my solutions to quiz problems 1 through 10 with Luke, Molly, & Jin by Thursday, May 20th
- 3) My plan for the upcoming week is as follows:
  - a) Tuesday, May 18th: to-do list **items a & b**
  - b) Wednesday, May 19th: to-do list **items b & c**
  - c) Thursday, May 20th: to-do list **items c & d**
  - d) Friday, May 21st: to-do list **item b**
- 4) No explicit help/support is needed for this week **except for confirmation as to whether the YouTube playlist for INA: Lesson 1 is finalized and available for study**

### Molly Vainish

So far in quiz 2 I am halfway done. I think question 3 was my biggest struggle so far. I spent many hours trying to understand it and be able to write out how I got the answer. It's easy to find an equation online but being able to explain how the equation was derived and why it is used was a lot harder to learn and understand. I also have not started revising quiz 1 so I need to do that. I feel like last week I just had no motivation to work and that has made me very stressed since now I have a major workload to do. I also need to finish lesson 11 so that I can do problems 5-8. My plan for this week is to get done quiz 2 today and study for my accounting midterm. Tomorrow I would like to try and get the revisions for quiz one so that the rest of the week can be dedicated to studying for my midterm Saturday.

## Jin Matsumoto-

I'm stuck on #2 and couldn't solve so skipped to #3 and certainly got the answers for #3 and #4. Now I'm working on #5 and to solve it I'm watching lesson videos all over again. I haven't taken much notes for the lessons this time so I can watch them again and take extra notes to understand more. Looks like the problems on the quiz from #5 is pretty much about lesson 11 so I'll study more about lesson 11 stuff.

## Luke Hofstetter

1. I have started the quiz, and I've only started working on problem 1. I haven't solved any problems and I think I could use help on a lot of them (though I've only really glanced through the other problems).
2. Quiz 2 would be at the top of my priority list, then revising quiz 1 and my notes for chapter 11
3. I think my plan is currently to start on/finish at least 4 problems on quiz two today, and I'd like to have that as a major focus of the next two days so I can spend the rest of the week concentrating on revising those answers and with Quiz 1. And I want to finish my notes for chapter 11 tonight too because I want to have that done before tomorrow, so I can do my notes for chapter 12.
4. I think that I need help from the people around me (my roommates) to allocate a good amount of time for each portion of what I need to do. I think I'll also need help from my groupmates to do work together so I can stay focused cause that's always been difficult for me.

## Room 4: Deep Learners '95

### Ricardo:

I will plan on working on the corrections today. I will also wrap up the chapters for Quiz 2 and start tackling that Quiz. I have been focusing on Draft 2 of Quiz 1. I would like to finish Quiz 1 draft 2 by Thursday 5/20. Then, focus on Quiz 2 until next Tuesday. So, by Today, I will wrap up all of the videos up to Chap 11, then knock out Draft 2 of Quiz 1 by Thursday and Draft 1 of Quiz 2 by next Tuesday. I would prefer to follow the due dates, but the material for quiz 1 is the basis for Quiz 2, and mastering that material will make quiz 2 less daunting. As far as support goes, the strict deadlines help. The material is available. It comes down to me and my discipline. Also, my Entrepreneurial Project is due tomorrow, so that will free up a ton of time.

### Sanjay Arattukulam:

I have started working on quiz 2. I've started question 1 and 2, but am a little unsure about some parts. Since I got back from my trip late Sunday night I am just getting started on it all so I need to catch up. Especially since I will be leaving for Tahoe on Friday, I need to get as much done as possible before I leave. I still need to finish my corrections for quiz 1, so I am a bit behind right now but plan to have everything done in time. For my corrections, I want to finish those today, and I want to get at least 2 questions on Quiz 2 done today as well. I plan on working on a couple questions a day so I can finish it on time but I am a bit nervous about it.

### Eric Fleming:

Regarding quiz 2, I have started the first question and looked over the rest of the questions. To prepare myself, I plan to revisit my notes and solidify my understanding of each topic prior to completing the rest of the quiz. This week, my plan is to take a day to review and do strategic practice problems to help me practice applying the concepts. The help I may need is trying to fully grasp the idea of the limit directional derivative and the dot product for directional derivative derivation.

### Mathys Lemos:

I have not started the Quiz 2 yet, but I plan on starting today in class. I just finished up my Quiz 1 corrections this morning. I have been watching lesson videos all the way to lesson 11 as well as doing in-class problems and reviewing other students' questions and corrections as well. I have also been looking for videos on Khan Academy and with other video authors that you showed us in Lesson 10 chain rule lesson. I like to supplement them with your videos to get two explanations of the concepts. I plan on turning in Quiz 2 by this Thursday the 20th and I plan to turn in my corrections, if needed, by next Tuesday, the 25th.

## Room 5: FasTrak

Nick:

I have started working on Quiz 2, Draft 1. I feel I have solutions for 1-4 and 9-10 and a rough plan of action for 5-8, but I want to take more time on 5-8 and maybe the others as well to try and understand the content at the deepest level that I can at this time, and consider multiple perspectives that I could take.

I would not mind cross referencing computations for 3-4 with people. I solved 4 using two similar but different representations and finally today got the same value today to work out, but it could still be incorrect or off.

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Plan of Action for the Coming Week:

Write up for 1-4 + Diagram Creation

Read Chapter on Continuity and Limits, review some auxiliary theorems and proofs of theorems related to the construction of directional derivatives and derivatives of composed multivariate functions. Work to understand how multivariate chain rule and derivatives in general may be represented by matrix multiplication operations.

Take a peek at implicit function theorem at some point. Also want to see if I can find transformation function for vector/axis rotation in 3-D. I have seen a 2D version but want to work on 3D version for perhaps another way to solve aspects of problem 3.

Create paper outline for 5-8 then type it up and add appropriate visuals/diagrams.



Room 6:

## Room 7: Group 2 Thursday

### Yiqiao Lin

1. I just started working on Quiz 2 this morning and I find it's harder than the previous one, or say more complex. I think it takes me a bit of a long time to work on questions based on lesson 4, I need to refresh my memory for the previous stuff.
2. I need to review the stuff for my next step.
3. In the next whole week, I have to finish Quiz 2 before Thursday and Quiz 1 before Saturday. And watched the next lessons on Sunday.
4. I'm good for right now. I just need time to work on quizzes.

### Wingfung Li

1. I started working on Quiz 2. I think I have solved questions 1, 2, and 4. I stuck on question 3.
2. Review the videos
3. I prefer to finish Quiz 2 on Wednesday. Then watch the next lesson's videos.
4. I'm good right now. I just need to finish all the stuff on time and follow my schedule.

### Akira Chou

1,2,3,4) I am done

Room 8: TAKE

Keirin

I have just started working on quiz 2 today after I ate lunch. As I have just recently started I have yet to complete any problems, I am currently working on problem 1. I plan on having attempted most of all of the problems on the quiz by Thursday so that whichever problems I have problems with I can ask the people in my group for advice.

Room 9: Wingin It

## Room 10: ( 9 + 10 ... 21 ! )

### 1. Francis Chau

- a. I have not started on the quiz yet, but plan to start working on it sometime tonight. To prepare I am reworking my notes and going through the lecture videos again.
- b. Firstly, I need to finish the rest of lessons 10 and 11 notes to actually start on the quiz.
- c. My plan for this week, I will first start by finishing up the rest of the notes that were supposed to be done earlier, so by the end of today (there are not that many lecture videos so this seems doable). Next I will spend some time Wednesday and Thursday doing the quiz and talking it over with Sunny. I also have other work from other classes that has just popped up so I will be doing that in conjunction with the work done in this class. So realistically, I can expect to be finished with the work for this class by next week.
- d. The only support that I need this week is confirmation that I am doing the work correctly.

### 2. Sunny Deng

- a. I am still working through the material and haven't started the quiz yet. I am planning to review Lesson 4-11 so that I can be more prepared for Quiz 2.
- b. I haven't done with the notes from 9-11, but I have finished watching all of the lecture videos.
- c. I will start Quiz 2 as soon as possible and hopefully can finish it before Thursday so that I can discuss about the quiz with my groupmate.