1. How did the quiz go for you over the weekend?
2. What questions came up for you?
3. What comments and feedback did you have?

Room 1, 2PM
Jessica Lee - 1. The quiz was kinda confusing at first, but all the stuff that it asks for is what we learned in the videos and in class; 2. Im still confused about question 4 with the cosine formula to show that r is orthogonal to a; like we would put in theta as 90 degrees in the cosine formula but that is by definition orthogonal?? (since cos(90) = 0) So idk what its asking; 3. I think there were some typos in the quiz; retweet @emma 3.

Emma Foss - 1. It went ok, the sort of "open-ended/general" proof questions are new to me, it feels like in the videos we are given small pieces, and the questions seemed to ask us to put them together and form the bigger picture on our own, which is hard. I'm used to more specific questions. 2. Number 7 definitely tripped me up the most, possible typo/just not sure how to start/where to go with that one. 3. I want to see more example problems maybe? I spent a lot of time sifting through outside sources

@Emma: yes. You got it… That quiz is designed to ask you to synthesize in your own language. I can talk more about that when we speak today. Exciting to see that your struggling. That is the mark of deep learning. Please know that you won't be punished for your struggle. You will be rewarded with the best grade I can give you and, more importantly, with deeper knowledge as the class goes on! -Jeff

Sulphine Susie Odio - **1.** The quiz was okay. It was nice collaborating with my group. Going back to the videos was very helpful because there were similar things that appeared in the quiz. **2.** In question 7, I wasn't quite sure how question 3&4 would help in the answer. Maybe it was a typo and we had to consider questions 5&6???? Also, I wasn't sure about how to answer the last part in Question 4: "Why does this make sense?" arccos(0) = pi/2 ??? **3.** Overall, the quiz was very cool. I liked that the content felt familiar yet made you think about how to use the content to answer the questions. Question 4 was my favorite one. I answered the questions almost like I was having a conversation or a tutoring session. Super cool.

@Sulphine: Yes, I think that was a typo. Can someone else confirm -Jeff

Binbin Weng -
1. I was confused with what I need to put on the paper for some questions. In traditional tests, we have questions, and need to write down answers. But in our quiz, I was not sure what I really need to write down for some questions.
2. How we get i * j = k, j * k = i, and i * k = -j? Just use the right hand? Is it like a theorem that we can use directly in our calculation?
3. The quiz pushed me to think, and combine all the stuff together to make them reasonable why you present them in the way you do in the videos. It is cool!

@Binbin: yeah, welcome to my class. Sorry this is confusing. I find that answers come from deep understanding. The reverse is not true: deep understanding does not always come from the answers to questions. What I'm trying to have you do is to learn how to build deep understanding early in the course so we can use that to build efficient ways to find answers to harder problem as the course goes on. I know that this challenges what you're used to. But I believe you can live up to this challenge and thrive in this environment. -Jeff

Room 2, Math Wizs (@Math Wizs: I love this format, by the way: you all are rocking this -Jeff)

1. **Brandon Lee** - The quiz was alright. I wasn't used to the quiz style, where we have to think about the problems conceptually instead of just doing problems. I had discussed about half of the quiz problems with my group because working together to understand these questions was really helpful in learning about the material that we were supposed to be quizzed on.
2. **Rizo Maribjonov** - The quiz was a little bit hard for me. I was a consumer, got tons of help from other students and groupmates. I think I need one OH to better understand the solutions, or one study session with other students, or drop-in tutoring
3. **Shokhijakhon Alisherov** (aka Shon) - Good thing about the quiz was that it was an essay type question which would make us think and come up with our solutions and in general it was not bad to finish all of the problems. However there were some of the things that I wasn't certain such as demonstrating the problems with different dimensions or also when we did the question #7 we meant to go back to the last questions not the previous questions 3 and 4? But in general a really helpful type of quiz with teamwork!
4. **Georgio Feghali**

    1) The quiz was okay, as Brandon mentioned, it was very different from other typical quizzes, because of the questions. They were more based on concepts and ideas, rather than just numerical problems. There was a lot of writing as we had to explain the whole process of the solution. However, with the help of my group, I think we managed to do a great job, understanding the questions and solving them.

    2) Regarding questions that I had, or we as a group had, I think in general our main uncertainty was in how to respond to certain questions to fully satisfy what the question wanted.

    3) I think in general, the quiz format is pretty concentrated on questions that require deep understanding, and I think that's a great way to test ourselves, we just need to condition our minds to think this way.

Room 3, Flonkerton Gang

Will Tholke

1) I spent upwards of 9 hours on Saturday working through the lecture material, OpenStax textbook, and my notes and found that giving myself a significant amount of study time in advance of the due date allowed me to deeply understand the theorems (and proofs) that were on the quiz. I really enjoyed working through the problems as it felt like I was solidifying my understanding of the notes I had taken from watching the lecture videos.
2) At first glance, I was unable to solve over half of the problems, but I ended up realizing that most of my difficulty came from my lack of understanding of the concepts covered in

those problems. After using the resources available to me, I was able to understand how to solve each problem, although one or two of my final answers may be incorrect.

3) The only comment I have is that, on the following quiz, it would be nice if Jeff included quick questions for problem-solving that had explicit answers in the form of the output of the dot product, cross product, etc. of whichever inputs in R2 or R3.

Luke Hofstetter - It didn't go great, but that was mainly on me. I thought that I could get the materiel without really taking time to go through it and dive into it, so I was only able to do up to 4 (so far). That definitely sucked because I wish I had taken more time to understand it and been more passionate about it, but I think I go into difficult subjects with a lot of overconfidence sometimes and that hit me harder here. I definitely have questions, don't really understand how the cross product actually projects a vector. I think my feedback is for myself lol, mainly to give myself more time and stay on top of the videos because I wasn't on top of it going into the quiz.
Jin Matsumoto - I spent a lot of time rewatching the videos and working on the problems but i don't think I fully understand all the lectures. Dot sign and cross sign used to be the same before but this time completely different they are just confusing me. I was wondering if there is more way to define some of lecture show like how to define the area of parallelogram.
Molly Vainish: 1. The quiz was harder than anticipated. I spent many hours working on the problems. I did struggle with the quiz the videos were not enough for me to understand each lesson and so I had to rely on alternative methods such as using the textbook and watching a lot of khan academy.
2. I think the main issue I had was making a connection from the videos to the work and I had questions on how to with not understanding how to use the videos to help solve the problems I was getting pretty frustrated and went to math lab on help explaining the concepts. That was pretty helpful I was able to use the knowledge from watching the videos and have the tutor piece the information together to better understand.
3. I don't think I do well with the videos. I would like another option because I feel lost all the time.

Room 4: Deep Learners '95
Sanjay Arattukulam

1. For me this quiz was pretty confusing and I struggled a good amount. Even though I watched all the lectures and took notes, when actually trying to apply it to the problem I was having a hard time. I spent a ton of time rewatching lectures and looking at the handwritten notes but I still struggled.
2. I feel like since I am still not confident in my math abilities every single thing I do, I doubt myself which is very frustrating. I tried to follow the notes the best I could but at the same time I tried not to copy it.
3. I think I for sure need to do more practice problems because that is the only way I will have more confidence to solve each problem. Instead of just solving it mathematically it required a lot more in depth thinking.

Ricardo Higareda

1. For me it was difficult, due to poor time management. I have since addressed the issue and will be cutting back on work. I would have informed them sooner, but my supervisor was out of town.
2. The questions that came up for me were due to poor studying and time management. I was confused on the second question regarding the direction of the new vector. I had issues deriving equations. Usually, I just memorize algorithms and plug and chug. It is a matter of getting used to also being able to explain conceptually our thought process.
3. The quiz was straight-forward and clear. If you watch the videos and take notes, you should do well.

Eric Fleming

1. For me the quiz involved a lot of time going through the notes from the videos and trying to make connections. Overall it was difficult for me to understand how to derive some formulas and what I need to do to have a strong answer to each question.
2. While taking the test, I was unsure how to answer questions that were the same as the notes. I didnt want to have the exact same thing that was written in the notes, however, I wasn't sure how to fix this.
3. Overall i need to go through the videos/notes more before the quiz so I can use my time more efficiently.

Mathys Lemos

1. For me the quiz was difficult but the more I reviewed the video the better understanding I got. I was not able to finish a few questions though.
2. I had a few questions on the projection (question 3) and the cosine formula/dot product (question 4).
3. I would like a study guide for a way to practice more example problems.

Room 5: FasTrak

Luke Miyaki

1. The quiz went pretty smoothly for me, but I think that's mainly because I chose to spend quite a bit of time on it, making sure to look over my notes and even go back and rewatch the videos if I didn't fully understand something. I'm sure it also helped that my group mates also seemed to know what they were doing.
2. Really the only question that arose for me was on number four and proving that the vectors were orthogonal to each other. I know Ray from my group asked about it too. I think we both just had to solve for theta instead of doing cos(theta) and we got 90deg which solved that. The other questions I had were just thinking to myself and connecting concepts from one problem to another.
3. I thought it was pretty straightforward and definitely required us to think of the more conceptual / theoretical basis of the things we're learning, which helped require a more deeper analysis. I think it will be more clear how it went after we receive feedback.

1.It went well I think. It was a good opportunity to express more generally the concepts that we have been learning over the past few weeks and extract the main ideas. The only thing is that sometimes in trying to synthesize everything, sometimes you actually get a little muddled in the details and then it is hard to sort of re-engage with the main stream of content. I think also I had a hard time deciding when enough was enough since I like the idea of having quizzes be a sort of “master text” to refer back to, since we are allowed to produce drafts so trying to know what I wanted to say was challenging at times.

1. I had a multitude of questions that came up as I worked on the quiz, but nothing that is really like a straightforward question. I guess it made me think a lot as I tried to draw connections between things, but as far as the base material I felt okay. I was wondering about notation though. I like certain mathematical styles a lot more than others, but I am not sure if the ones I used are okay for this course.

3. I liked that the quiz was general and tried to hone down on important questions, although doing this is more difficult I always like to be able to understand more than just how to implement a procedure.

Teja Mandadi

1. The quiz was pretty straightforward for me and I did not have too much trouble with it. For a few of the questions, I was able to recall concepts on my own and solve them as if it were a “timed test” but for some other questions, I needed to recall my notes to get a quick refresher.
2. I had a few issues with number 7 since I wasn’t sure where to start but my groupmates helped me find a place to build on and solve the problem.
3. I liked the more theoretical aspect of it as it mainly asked us to derive formulas and explain but I would also enjoy more practical problems in the future too.

Room 7: Group 2 Thursday

Yiqiao Lin-

1. The quiz was OK but I have never done a quiz like that. I spent more than 5 hours finishing it, which is longer than the regular quiz, definitely.

2. I was confused about this” please demonstrate multiple dimensions of your concept image associated with this derivation. “ And in question 7, I have no idea “use our work on problems 3 and 4 “, I guess 5 & 6 maybe?

3. I think it’s worth doing the quiz like that, because I actually find out some knowledge that I forget or not sure so that I come back to the video and watch it again.

Akira Chou

1. The quiz definitely took longer than I expected. However, all the information was embedded in the lecture YouTube videos so I was able to meaningfully gather and review course material.
2. Several questions came up while taking the quiz. Like Lin, I was confused about that “please demonstrate multiple dimensions… derivation” meant. I included other questions that I never resolved in my submitted quiz.
3. It’s clear that the questions in the quiz were carefully and deliberately worded to encourage math learning. There were aspects I was unable to resolve, but I felt less stressed with the knowledge that this was the first draft. I wonder if there is benefit of including straightforward questions for the benefit of question variety and comprehensive math content.

Wingfung Li: 1. Some of the questions on the quiz make me confused, I don’t know what this requires me to do.
2.
3. The quiz has many theoretical problems that I rarely did before. But that’s quite good I think. I hope we can do more practice problems in the future.

Room 8: TAKE

1. Andrew Gao
    a. I really liked the format/style of this quiz. Compared to the tests I usually have in school, it went much more in-depth and most of the problems were like mathematical proofs. The style reminds me a lot of my previous Calculus teacher who loved challenging us with complex proofs. The quiz definitely pushed my critical thinking ability and I felt that I learned a lot. I had to think much harder compared to simply plugging in values into memorized equations, or doing identical problems one after another.
    b. I think one of the biggest questions I have would be for #4 on the quiz. I believe that I proved how the two vectors were orthogonal to each other, but I feel that my answer for finding the sum of vector **b** as the vector sum of **p** and **r** was insufficient.
    c. I struggled a little bit in terms of not having enough space for some questions. Are we allowed to attach a piece of binder paper to finish a question if we do run out of space? Also, I didn’t see the document you had on writing mathematical solutions at the time of the quiz, so most of my work may not be organized by your standards.
2. A
3. Keirin Hanay
    a. I felt like the quiz was good. I was not quite sure how in depth I should go into my answers. I was not sure if I was putting enough information in my answers. I feel

like the questions made me think more about the problems as I had to make my answers more in depth than I would have done in a normal quiz.
    b. For me the problem I had the most trouble with was number 4. But looking back at the problem I realize I made some simple mistakes.
    c. I don't really have any comments or feedback as I thought that the quiz was good, while it was different than what I am used to.
4. Ethan Simeon
    a. The quiz was alright. I felt like I spent a lot of time on problems that didn't really require that much effort though. I was not exactly sure on how far I should've elaborated on my answers and I ended up taking more space than provided.
    b. I treated it unlike any quiz I've taken before because it forced me to explain my thought process thoroughly rather than give a straight answer. I hope upcoming quizzes won't be as large of a time commitment as this one was. I'm still learning the class format and adapting to the pace and I hope I have a better strategy for the next quiz.
    c. This quiz format was definitely a challenge and I found myself talking through most of the problems verbally just to reinforce the material and make sure I wasn't tripping. But I feel like I did alright and I look forward to making corrections in my upcoming drafts.

Room 9: Wingin It

Room 10: 9 + 10 … 21!

1. Francis Chau
    a. The quiz took much longer than I actually thought. I felt like it was pretty rough for myself.
    b. The general question that I had for the quiz was the obvious: how well did I do? The other would be, what do you mean by explaining my work? Does this mean like written words of how I got to my answer or do I have to explain the whole process is written words?
    c. The only feedback that I can give is to be more specific with the questions because I was mainly confused when you asked to "explain". Other than that I don't really have any feedback mainly do to the fact that I believe that I am lacking in understanding the material fully, or at least what I believe I am lacking in.

2. Sunny Deng
    a. The quiz was actually harder than I thought and it took much time than I expected, too. But I am glad that me and my group work this out eventually.
    b. The most confusing part for me while doing the quiz is the explanation part, I had a hard time trying to "explain", especially for question 1 and question 7.
    c. The quiz is difficult for me in the way that it requires analytical work.

3. Kaitlyn Vo
    a. How did the quiz go for you over the weekend?
        i. It took some time over the weekend because I went back through a lot of the lectures and notes to help me solve the problems, but it was manageable.
    b. What questions came up for you?
        i. There were a few typos, but that was not that big of an issue. Generally though, for question number 6, I know that we are solving for the area of the parallelogram and that also gives us information for the cross product. I just wanted to clarify whether I would need to write the absolute value of sin(theta) if I am not looking specifically for the cross product of vectors x and y, and looking for the area of the parallelogram. I could understand both ways as to why it would make sense to have the absolute value (the area should be positive) and to not have the absolute value (different to solving the specifically for cross product)
    c. What comments and feedback did you have? \
        i. If the quizzes maintained a similar format with reference to your lessons, I think I could continue to manage the quizzes.