**Mr. Ingraham**

Continuing education plan

**Calculus:**

As I said in an email a while ago this is your chance to really experience what being a college student is. You are going to have to study, find resources, look up videos, and find example problems on your own. There is only so much I can give you. As you are studying, anything that you feel you need more practice on go find worksheets, watch videos and practice it as much as you can until you have it down. Listed below are some of the things you should be working on.

* Learn integration by parts:

1. Here is the best video I found. Start here and then watch the other videos that follow. <https://www.khanacademy.org/math/ap-calculus-bc/bc-integration-new/bc-6-11/v/deriving-integration-by-parts-formula>
2. Then for more practice do the problems in section 8.2 of your book. The odd answers are in the book but if you need the even ones or a more detailed solution I can send you pictures from the answer key. Let me know.

* Learn Trig substitution for integration:
  1. This is the trickiest one to learn in my opinion. I’ve spent probably 5 hours doing practice problems on this. So please put some effort into learning this. The best video I’ve found is this one

<https://www.khanacademy.org/math/integral-calculus/ic-integration/ic-trig-substitution/v/introduction-to-trigonometric-substitution>

* 1. Then for more practice do section 8.4 in your book. Again, I can send you pictures of the answers if you need them.
* Learn how to find the average value of a function
  1. This one is quick as it doesn’t involve any new techniques. But here is the best video to watch. <https://www.khanacademy.org/math/ap-calculus-ab/ab-applications-of-integration-new/ab-8-1/v/average-function-value-closed-interval>
* Work on the review/practice test that you were sent in the mail and then put together a page of notes.

**Semester Final:**

I am still waiting for CWU to give me more guidance on how to administer the final. I will give you updates when I learn anything. As for a timeline, I would like to give the final near the start of May…which is my birthday by the way.

**Parting words**:

I miss you all more than you can imagine. If teaching evolves to being behind a computer full time I will give it up in a heartbeat. Building relationships with all of you is what teaching is about and if we learn some math along the way great. Maybe you don’t believe me, but please don’t hesitate to reach out to me if you need help. We can set up a Zoom meeting to go over things. There is a whiteboard option in Zoom so it will be just like I was doing the warm-ups in class. Don’t feel like you will be interrupting me at all. Most of the day I just wander around my house bored and looking for things to do. I even read a book for the first time two or three years. If you know how much I hate reading this will really give you an idea of how bored I am.

Take care and I love you all!

Ingraham