

First, the exam:

Prob 1: exactly like multiple homework probs in 3.3

Prob 2a: exactly like practice prob 3.2.19 and 3.2.18 was turned in

Prob 2b and c: I stopped the world in lecture and spent half a class talking about the differences btwn smooth fcn, smooth image curves and what it means to be a regular path

Prob 3: I spent 3 lectures talking about “best linear approximations”. To not anticipate a question on this seems ridiculous.

Prob 4: You had to know there was going to be a Chain Rule question coming.

Prob 4a: there are 5 practice/homework problems assigned that are like this. And this problem is exactly like homework question 14.

Prob 4b: this is like multiple homework problems in section 4.1

Prob 5a: domain question (asked on every exam so far this semester)

Prob 5b: exactly like a homework question that was handed in

Prob 5c: an application of the property of gradients. Also, directly from the notes.

Prob 6a: There were homework questions on this in chapter 1 and again in 2.7.

Prob 6b: application of the gradient.

Virtually everything I asked on this exam was already asked in a homework set. Those topics that were not are directly from the notes.

Second, the real issue:

I recognize that most of you come to college with diminished study skills. Unfortunately K-12 education in this country has moved away from conceptual learning and focuses on exam taking. As a result, all of our undergrads are bright but have little true understanding of previous material they learned or the ability to apply what they learned in high school. The skill that many have learned is just to mimic solution techniques to specific types of problems. Having your high school teachers routinely tell you exactly what will be on exams perpetuates this problem. But, for those who have listened to me this semester, I have told you exactly what you need to do to succeed in my class.

Every question asked on this exam is either from the homework (often reinforced in discussion) or the lectures. It is not inappropriate for me to expect an A student to know all of the material in their notes and homework. You should know how to do and the point of every single homework question submitted. You should also understand the concepts and examples in the lecture notes. If either of these is not true when you sit for the exam, then you have not properly prepared.

In college, you do not pay for an education. You pay for the right to earn an education from the University. Many don't understand that. The point of this time is to learn the

skills you need to teach yourself anything you may need to know. To that end, learning how to discern from me what topics are important is part of the learning process. If you go back over the course notes, I believe it should be very clear what topics I spent extra time on and what I address cursorily. This is an extremely important skill that all must learn if they are going to succeed in their 4-5 years here. To that end, I will never put together a review sheet.

Feel free to share this with whomever you like. If you have further questions, let me know.

If the student who sent you this email would like to have a personal conversation with me about how to improve their study habits, I'd be happy to make the time for them.