

Math 212 Midterm #1 review sheet

By: A free-wheeling Spongebob Squarepants with a snail on his head

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Hi kids! I'm Spongebob squarepants and it's time to ROCK! That is, talk about calculus. This is a review sheet for your first midterm, Wednesday October 18th. I hope it helps.

1. Section 4.5: Integration by substitution. This section simply trains you to integrate functions that you've never been able to integrate before using a method called "substitution". At first, this section may seem as confusing as the fact that I'm a sponge that lives in the ocean, and yet my pants are perfectly square. Cubical, in fact. All the same, just do what I do and, for these types of problems, train yourself to look for a function and its derivative. Then employ the "*u*-substitution" trick that Corey went over in class. It's fun!
2. Section 5.1: The Natural Logarithmic function, differentiation. This section, along with most of the others in Chapter 5, is really just a review of a basic function that

has a funny definition. We will move rather quickly through these sections, and Corey will be sure to highlight the things you'll need to know. For instance, know the basic properties of the logarithm function, and its derivative. For this section, it's that simple.

3. Section 5.2: The natural logarithmic function, integration. For this section, you'll need to know, basically, the opposite of section 5.1. That is, there are A LOT of functions out there whose antiderivatives have to do with the natural logarithm. This section just explores how exactly the natural logarithm rears its ugly head.
4. Other suggestions. I would go over the quiz very carefully. You can expect many of the same questions you saw there, and perhaps some you didn't see on the quiz. After all, Corey couldn't have asked you everything you're supposed to know on a 20-30 minute quiz. Be sure to use my study guide, and the other study guide published on the course website earlier as a guide. And in your studying, be sure to ask Corey for help... the earlier the better. I understand that Corey is having a difficult time getting internet and home set up and if you wait too long he may not ever know you needed the help. Oh, and one more thing:

ROCK ON!!!