

Midterm #1 Review of Math 110 Fun!

The Count, from Sesame Street

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Hi everyone!!! The Count here, all the way from Sesame Street. It's that time of year when I really get excited—midterm time in math classes! I bet you thought I was going to say Halloween! 'A 'A 'A!!! Corey asked me to write a sheet for you to help you study for the upcoming exam. And so, what I've typed below is information regarding the sections that Corey didn't already give to you. So, to be clear, the exam covers all of the sections that the quiz covered, and in addition, the sections below. Now, I must type so that I may get back to Sesame Street before the sun comes up! Good luck, I hope the midterm is brought to you by some other number than 0 and some other letter than F!!! ROCK ON!

1. Section 3.6: Quadratic Functions. This section was great, in that we applied our knowledge of shifting and stretching graphs of functions from Section 3.5 to specific type of functions: quadratic functions! We studied very hard how to put these functions into “standard form”, and to then locate the vertex of the quadratic—the point which is highest or lowest. I would know how to put a quadratic function into standard form, find its vertex, and determine if that vertex is the highest or lowest point on the graph.
2. Section 3.7: Operations on Functions. This section was great as well, we learned how to construct new functions from old functions. We also studied the domains of these new constructed functions. There were two types of constructions, really: the first was a construction based on the four basic operations of arithmetic, $+$, $-$, \cdot , \div . The

other was function *composition*, written $f \circ g$, where the input x is sent through g first, then the result subsequently through f . I would know how to compute outputs of each of these functions, be able to express a rule for these functions (if rules for f and g are provided), and to be prepared to discuss the domains of these functions.

3. General suggestions: Corey told me that a lot of the quizzes looked good, but that the errors he encountered seemed to stem from a lack of practice mostly, rather than simple calculational errors. This indicated to him that for those people who scored low on the quiz (70% or below, or 35/50 or less) should consider practicing a considerable amount more in preparation for the upcoming exam—most of the exam is going to look very similar to the quiz, and that's sort of why Corey gives quizzes near the exam, to give you a really good idea as to what to study. Of course, Corey is there to answer any questions you have, and his office hours exist so that if you want to discuss any studying matters with him, he's there. Other than that, the errors he found weren't that bad. So practice up with the homework problems, and be sure to ask if you need any help! Good luck, and ROCK ON!!!