

Math 355 Quiz # 2 Review sheet of lateness!!!

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Hi everyone, this is the not-so-well understood Maggie Simpson, here to give you some hints on your upcoming quiz # 2 in Math 355. Corey tried to get this document online yesterday but just couldn't do it, so he made a special trip to the office today to get it available to you. I hope you do to the quiz what I'm doing to this unibrow baby!

1. Section 3.1: Sequences. This section introduces our next big topic: sequences, and convergence of sequences. Really, this section doesn't have a lot in it, but what it does have is extremely important: the definition of convergence of a sequence. The definition in the book is a little clouded by other supporting definitions, and that the most useful (of course, equivalent) definition is the ε, N definition Corey gave in class. This also appears in the book as Proposition 3.1. Corey strongly suggests that you know this definition thoroughly. In addition, he encourages you to understand all of the class notes and results from this section, as they will prove useful as possible quiz and exam topics.
2. Section 3.2: Limit Theorems. We spent a lot of time on this section because of its importance. First, the knowledge that every convergent sequence is bounded is a fact that will help us later, but for now, functions as a great example of how things are normally proven at this particular stage. Second, we learned about Theorem 3.2, and how each of those results (as nominal as they may seem) combine to form a powerful tool in computing limits. We saw this in class. Lastly, the remaining results about $x_n \in [a, b]$ and $x_n \rightarrow x$ implies $x \in [a, b]$, and that any real number is the limit of either a sequence of rational or irrational numbers are interesting results, and will prove useful later.
3. Other suggestions: ROCK ON!