

# Math 213 Quiz # 2 Review sheet of lateness!!!

The new Teenage Mutant Ninja Turtles shoes

May 24, 2008



*Hi everyone. What you're looking at is the Raphael version of the new Nikes. Enjoy the review sheet!*

1. Section 9.8: Power Series. This section is a description of how one finds the radius of convergence, and interval of convergence of a given power series. We notice that these are really the only sorts of problems that Corey did in class, and man, did he do a lot of them! I suggest strongly that you know how to find the radius and interval of convergence of a given power series, and any homework question which asks you to do this is a good one to study.
2. Section 9.9: This is the section where we learn tricks to construct power series of common functions, usually related somehow to the function  $\frac{1}{1-x}$ . Using composition, differentiation and integration, we found great ways to construct power series for functions that would be really difficult to find using Taylor's theorem.
3. Section 9.10: Taylor and Maclaurin Series. This section asks you to construct Taylor and Maclaurin series by the definition only. This usually requires us to find lots of derivatives and a pattern somewhere within those derivatives. See the homework problems for good practice!
4. Section 10.2: Parametric curves. In this section, we learned basic curve sketching techniques. In particular, one learns that the elimination of variables is a great way to take a parametrically defined curve and change it into a relationship between  $x$  and  $y$  which is much easier to graph.