MATHEMATICS 19A
CALCULUS
KASS

Homework Set 9

Make sure to read sections 4.6, 4.7, and review for the final exam.

1. Chapter 4.6 (Graph Sketching and Asymptotes), Exercises 17, 24, 32, 58, 62, 67. (For the graph sketching problems, make sure to figure out how to sketch the graph without using a computer or calculator.
2. Chapter 4.7 (Applied Optimization), Exercises 9, 28, 49, 59.
3. Review for the final exam! A list of the sections we've covered in-class is provided below. Pick five problems from these sections that have not been assigned as homework and solve them. Pick problems that will help you prepare for the final.

Sections covered: 2.1 (Limits, Rates of Change, and Tangent Lines), 2.2 (Limits: A Numerical and Graphical Approach), 2.3 (Basic Limit Laws), 2.4 (Limits and Continuity), 2.5 (Evaluating Limits Algebraically), 2.6 (Trigonometric Limits), 2.7 (Limits at Infinity), 3.1 (Definition of the Derivative), 3.2 (The Derivative as a Function), 3.3 (Product and Quotient Rules), 3.4 (Rate of Change), 3.5 (Higher Derivatives), 3.6 (Trigonometric Functions), 3.7 (The Chain Rule), 3.8 (Implicit Differentiation), 3.9 (Derivatives of General Exponential and Logarithmic Functions), 3.10 (Related Rates), 4.1 (Linear Approximation and Applications), 4.2 (Extreme Values), 4.3 (The Mean Value Theorem and Monotonicity), 4.4 (The Shape of a Graph), 4.5 (L'Hôpital's Rule), 4.6 (Graph Sketching and Asymptotes), 4.7 (Applied Optimization).

All section number were taken from the print third edition of the textbook. I am including the section names in case your section numbers do not match up.

Citing resources:
Please write a one paragraph describing the resources you used when working on this problem set. This could include people (students, professors, parents, etc) you talked about the homework with and online resources or books you consulted. A sample paragraph might be:

"This week I worked on the homework problems collaboratively at the the Red Room with my roommate and the bartender. We didn't understand the book's description of the 7-dimensional sphere, so we did a google search which led us to a YouTube video (http://youtube.blah.com) which clearly explained the topic. Then we checked our answers against an online solution key that we found on the webpage: http://blah.blah.edu."

This paragraph is required even if the only resource you used is the course textbook. You can use any and all resources you want when working on the homework, but failure to cite the resources you used honestly and accurately will be considered academic misconduct. Furthermore, the written solutions you submit should be written in your own words.

You can find some resources (e.g. your friend who took calculus last semester or WolframAlpha) that can provide you with the homework answers without helping you understand the material. I discourage you from using resources like this as it won't help you learn the material (or do well on the exams).