## Math 29 Review for Exam 3

Make sure you can do the following types of problems

- 1. Average rates of change and slope of a secant line
- 2. Instantaneous rates of change and slope of a tangent line
- 3. The meaning of the derivative
- 4. Graphical differentiation
- 5. Basic rules of differentiation
- 6. The product, quotient, and chain rules
- 7. Given a function, find critical points, and determine where the function is increasing and decreasing
- 8. Given a function, find inflection points, and determine where the function is concave up and concave down
- 9. Given a function, find all horizontal and vertical asymptotes
- 10. Given all of the above information about a function, sketch its graph.
- 11. Optimization word problems.