Assignment 8: Due Mon Oct 9th

This problem is worth 20 points.

$$f(x) = \frac{2x^2}{x^2+3} + 1$$

-Calculate and simplify f ' (x) and use this to find the critical points, if any.

-Name the intervals on which f(x) is increasing and on which f(x) is decreasing.

-Calculate and simplify f ' ' (x) and use this to find the inflection points, if any.

-Name the intervals on which f(x) is concave up and on which f(x) is concave down.

-Examine each critical point and determine if it is a local minimum, maximum, or neither.

-Determine if there are any vertical or horizontal asymptotes, and give their equations.

-Sketch a graph of the curve. Label axes, critical points, inflection points. This must be a physical sketch, no graphing software.