Math 17A
Kouba
Instructions for DETAILED GRAPHING

1.) State the DOMAIN of the function.

2.) Take the FIRST derivative and set up a SIGN CHART for $f'(x)$. Clearly mark the solutions to $f'(x) = 0$ and their y-values, and identify all RELATIVE and ABSOLUTE maximum and minimum values.

3.) State the OPEN INTERVALS on which f is INCREASING and DECREASING.

4.) Take the SECOND derivative and set up a SIGN CHART for $f''(x)$. Clearly mark the solutions to $f''(x) = 0$ and their y-values, and identify all INFLECTION POINTS.

5.) State the OPEN INTERVALS on which f is CONCAVE UP and CONCAVE DOWN.

6.) Determine all x-INTERCEPTS and y-INTERCEPTS.

7.) If appropriate, determine all HORIZONTAL ASYMPTOTES (H.A.).

8.) If appropriate, determine all VERTICAL ASYMPTOTES (V.A.).

9.) DRAW a rough SKETCH of the graph of $y = f(x)$ and CLEARLY identify the coordinates of all important points on the graph.