Precalculus BC **Name _____ Per: _____**

Theory Discussion #2: Inverse Functions **ID Number _____**

For this discussion of the theory behind inverse relations and functions, you will use a simple rational function of the form $f(x) = \frac{x+A}{x-B}$ where A is the last non-zero digit of your ID Number and B is the 2nd to last non-zero digit of your ID number.

Your own personal ID-function is $f(x) = \frac{x+\_\_\_\_\_}{x-\_\_\_\_\_}$.

Demonstrate the relation between your function and its inverse numerically (by showing how points are mapped onto new points), graphically (by showing the function and its inverse and their relationship), and algebraically (by finding the inverse function). Demonstrate how points are mapped onto corresponding points and how the chief characteristics (intercepts, direction, concavity, extrema, points of inflection, asymptotes, etc.) of the original function are mapped onto corresponding characteristics of the inverse function. Use this sheet and its reverse for your discussion although you may paste graphs (or even typed text) onto the sheet.

Due Date: Block on 12/8/08 or 12/9/08. This is not a regular homework assignment; under ordinary circumstances, late papers will not be accepted.