

Math 2215 - Calculus 1

Homework #11 - 2007.03.15

Due Date - 2007.03.30

Name: _____

For each of the three following functions,

- a) State the domain
- b) Determine if there are any horizontal or vertical asymptotes
- c) Locate all roots of the equation
- d) Find local maximum and minimum values
- e) State the intervals of increase and decrease
- f) Find the intervals of concavity
- g) Locate any inflection points
- h) Graph the function using your answers to parts a) - g).

1. $f(x) = (x - 1)^3(x + 1)^3$

2. $g(x) = \frac{x}{x^2+1}$

3. $h(x) = x^3e^{-3x^2}$