MATH 12002
Assignment #26
Derivatives

The following are the derivatives for the problems in Assignment #26 on §3.3. You *are* expected to compute the derivatives yourself on the homework, but these can be used to check your answers before graphing.

33. $f(x) = \dfrac{x^2}{x^2 - 1} = \dfrac{x^2}{(x-1)(x+1)}$

$f'(x) = \dfrac{-2x}{(x^2-1)^2} = \dfrac{-2x}{(x-1)^2(x+1)^2}$

$f''(x) = \dfrac{6x^2 + 2}{(x^2-1)^3} = \dfrac{6x^2 + 2}{(x-1)^3(x+1)^3}$

34. $f(x) = \dfrac{x^2}{(x-2)^2}$

$f'(x) = \dfrac{-4x}{(x-2)^3}$

$f''(x) = \dfrac{8(x+1)}{(x-2)^4}$