MATH 134 – Calculus with Fundamentals 2
Diagnostic Quiz on Derivative Rules
January 26, 2018

Directions

Do all work on the quiz sheet (both sides). You *do not* need to simplify your answers.

Questions

(1) Find $f'(x)$ and $f''(x)$ if $f(x) = x^4 + \sqrt{x} - e^x$

(2) Find $f'(x)$ if $f(x) = x^3 \cos(x)$.

(3) Find $f'(x)$ if $f(x) = \dfrac{\tan^{-1}(x)}{x^2+1}$. (Note: $\tan^{-1}$ is the inverse tangent, or arctangent, function; the -1 is not a power)

(4) Find $f'(x)$ if $f(x) = \ln(\sin(x) + e^{3x})$.