MATH 133 – Calculus with Fundamentals 1
Quiz 5 – October 29, 2015

Your Name: _____

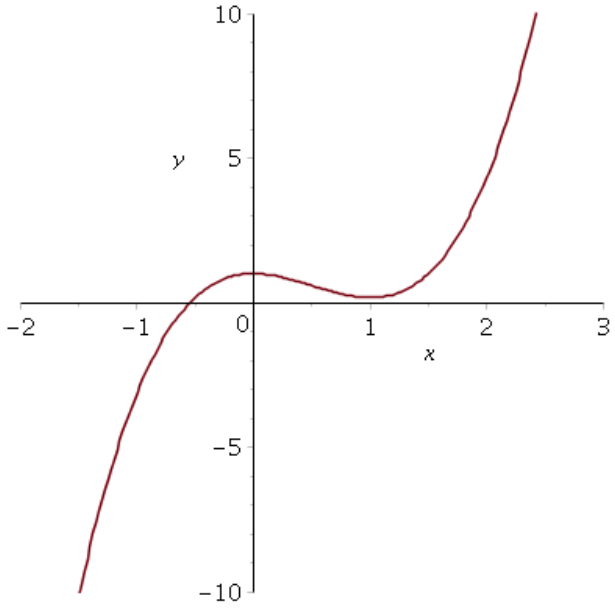
Directions

Do all work in the space provided below or on the back of the second sheet. There are 30 total points possible. You may use a calculator.

Questions

1) (a) (5) Find the derivative using the "short-cut" rules (i.e. you *do not* need to compute the limit of the difference quotient): $f(x) = 8x^{5/4} + 3x^4 + e^x$

(b) (5) Use the limit of the difference quotient to compute $g'(x)$ for $g(x) = 5x^2 + x$.

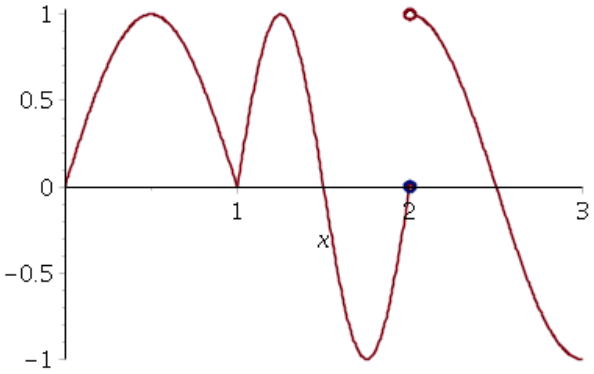


2) The graph above is $y = f(x)$.

(a) (4) Over which interval(s) is $f'(x) > 0$? _____.

(b) (4) Over which interval(s) is $f'(x) < 0$? _____.

(c) (2) For which x is $f'(x) = 0$? _____.



3) The graph above is $y = g(x)$.

(a) (5) Is g differentiable at $x = 2$? Why or why not?

(b) (5) Does g appear to be differentiable at $x = 1.5$? Why or why not?