

MATH 133 – Calculus with Fundamentals 1
Quiz 7 – November 17, 2017

Your Name: _____

Directions

Do all work in the space provided. There are 30 total points possible.

Questions

1) (a) (7) Find $\frac{dy}{dx}$ by implicit differentiation given that $x^3y^2 - 5y + x = 1$.

(b) (3) Find the equation of the tangent line to the curve with the equation $x^3y^2 - 5y + x = 1$ at $(x, y) = (0, -1/5)$ using your answer from (a).

2) Differentiate the following, but don't simplify:

(a) (10) $f(x) = \ln(\cos(x) + \sin(3x))$

(b) (10) $g(x) = \tan^{-1}(e^{5x}) + \sin^{-1}(x^2)$