

Name _____

Show all your work! You may work with others but must submit your own solutions

1. (10 points) Find derivatives of each of the following functions. Your final answer should be written in the form of an equation, where you should use correct variable names and proper terminology when referring to the derivative.

(a) $y = \frac{1}{4t} + 2t^{-3}$

(b) $f(x) = \frac{\tan x}{x^2 + 1}$

(c) $g(t) = 5t^3 \sin t$

(d) $w = \cos^2 x$