

MATH 111-007 QUIZ 4

OCT 4TH, 2021

Problem 1. Differentiate $f(x) = \tan^2(3x^2)$.

Problem 2. Find $\frac{dy}{dt}$ when $x = 1$ if $y = x^2 + 7x - 5$ and $\frac{dx}{dt} = \frac{1}{3}$.

Problem. (Bonus) Prove that $\frac{d}{dx} \sec(x) = \sec(x) \tan(x)$. (Hint: use the Power Chain Rule and then realise something.)