

Math 105 Quiz 4
§2.5-§2.7, 10/12/12

Name:

Show all work for credit.

1. Find the derivative of $f(t) = 3\cos(t) - \sqrt[3]{t^4} - 4^t + 2t^\pi - 4\sin(t) - e^{6t} - 7 + \frac{\ln(t)}{2}$.
2. Find the antiderivative of $f(t) = 3\cos(t) - \sqrt[3]{t^4} - 4^t + 2t^\pi - 4\sin(t) - e^{6t} - 7 + \frac{1}{3t}$.
3. Find the equation of the tangent line to the function $e^{x/2} - 2\sin(x)$ through $x = 0$.
4. Determine the solution to the IVP $y' = 4y$ where $y(0) = 2$.