Math 105 Quiz 5
§2.5-§3.1
Name:
Show all work for credit.

1. Find the derivative of $f(t) = 3cos(t) - \sqrt[3]{t^5} - 4^t + 2t^\pi - t^3e^{6t} - 7 + \frac{ln(t)}{2}$.

2. Find the antiderivative of $f(t) = 3cos(t) - \sqrt[3]{t^5} - 4^t + 2t^\pi - 4sin(t) - e^{6t} - 7 + \frac{1}{3t}$.

3. Find the equation of the tangent line to the function $\frac{2sin(x)}{e^{x/3}}$ through $x = 0$.

4. Determine the solution to the IVP $y' = 6y$ where $y(0) = 4$.