

Math 124

Name _____

Quiz 5

TA _____

Instructions: No notecards or calculators are allowed. Do not worry about algebraically simplifying. Box your final answer. You must show your work to receive credit.

1. (2 pts) $f(x) = x^4 - 3x^3 + x^2 - 2$; $f'(x) =$

2. (2 pts) $f(x) = x + 3^2$; $f'(x) =$

3. (3 pts) $f(x) = (x^2 + 1)e^{2x-3}$; $f'(x) =$

4. (3 pts) $f(x) = \frac{-x}{\sqrt{25 - x^2}}$; $f'(x) =$

5. (2 pts) Let a, b, c, d be constants. $f(x) = \frac{ax + b}{cx + d}$; $f'(x) =$

6. (5 pts) $f(t) = \sin(100 + (20 - 2t)^2)$; $f'(t) =$

7. (3 pts) Find the implicit derivative $\frac{dy}{dx}$ given the equation $\frac{1}{x} + \frac{1}{y} = 1$.