

Math 121C

Fall 2009

Instructor: Shawn Rafalski

Applied Calculus I

Quiz 6

Write your name on this quiz

1. Calculate the derivative of $F(x) = \sqrt{6x+4} + (2x^3 + 2x)^4$.

$$F'(x) = \frac{1}{2}(6x+4)^{-1/2} \cdot 6 + 4(2x^3+2x)^3 \cdot (6x^2+2)$$

2. Calculate the derivative of $G(x) = e^{(7x^3)}$.

$$G'(x) = 21x^2 e^{7x^3}$$

3. Calculate the derivative of $H(x) = \ln(x + e^x)$.

$$H'(x) = \frac{1}{x+e^x} \cdot \frac{d}{dx}(x+e^x)$$
$$= \frac{1+e^x}{x+e^x}$$