

Name _____

Homework 8
Section 3.4

1. (3) Compute the derivative of $f(x) = (4x^2 - 3)^5$.

2. (3) Differentiate $y = \frac{6}{(x^2 + 3x)^2}$

3. (5) Determine $f'(1)$ for $f(x) = e^{(5x+4)^3}$.

4. (4) Determine (and simplify) the derivative of $g(x) = (e^x)^6 + (\sqrt{x})^5$

5. (5) Find the equation of the line which is tangent to the graph of $f(x) = (x^2 + x)(5x - 1)^4$ where $x = 1$.