

Name _____

Homework 16
section 3.3

1. (4) Compute $\frac{d}{dz} \left(\frac{z-6}{z+6} \right)$.

2. (4) Find the derivative of $f(x) = \frac{ax+b}{cx+d}$. Simplify your answer.

3. (4) Compute $f'(t)$ for $f(t) = (t^4 + 3t^2 - 2)e^t$.

4. (6) Find the equation of the tangent line to the graph of $f(x) = 4^x(4 - x^2)$ at $x = 2$.

5. (2) Find $\frac{dw}{dx}$ for $w = \frac{2x^5 - 3x^4 + 7x^2}{x^2}$.