

Name _____

Homework 7
Section 3.3

1. (4) Compute $\frac{d}{dz} \left(\frac{z+3}{z-3} \right)$.

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

3. (4) Compute $f'(t)$ for $f(t) = e^t(t^4 - 5t^2 + 3)$.

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 $w = \frac{3x^5 + 2x^4 - 6x^2}{x^2}$.