232 Quiz R
September 2, 2011.

Section: _____ **Name:** _____

Work individually. No technology, Notebooks, or other material allowed.

You do NOT need to show work for any of these problems.

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

2. If $f'(x) = 3x + 1$ and $f(0) = 4$, find $f(x)$.

3. Find $\lim\limits_{x \to \infty} \dfrac{(x + 3)(2x + 1)}{4x^2 - 1}$.

4. Find the interval(s) on which the function $f(x) = x^3 - 3x^2 - 8$ is increasing.