Math 166 - Section A
January 18, 2008 **Name:** _____

Quiz #1b: Review of Calculus I
Show all work in a neat and logical manner in order to get full credit.
No Calculators are allowed.

6 pts. 1. Find the indicated limit or show that it does not exist.

(a) $\lim_{x\to 2} \dfrac{x^2 - 5x + 6}{x - 2}$

(b) $\lim_{x\to\infty} \dfrac{x^2}{x^2 - 8x + 15}$

12 pts. 2. Find the derivative of the following functions. Simplify your answers, if possible.

(a) $f(x) = (x^2 + 4)(x^2 + 2)$

(b) $g(x) = \dfrac{x^3 - 1}{x}$

Don't forget the back! $\Rightarrow$

(c) $h(x) = \cos^2(4x^2)$

12 pts. 3. Find the indefinite integral

(a) $\int \sqrt{4x+3}\, dx$

(b) $\int \frac{1}{x^2} + 2x dx$

(c) $\int \sqrt[4]{w}\, dw$

Points earned: _____ out of a possible 30 points