MA 125-06 §2.4 - 2.8	Quiz #3	score	Name: 19 September 2000
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1. Let f(x) be as defined below. Determine if f(x) is continuous at x = 2 by checking the definition of continuity. Fully explain the limits you calculate. (5 points)

 $f(x) = \begin{cases} \frac{x-1}{x^2-3} & \text{for } x \le 2\\ x^3 - 4x + 1 & \text{for } x > 2 \end{cases}$

2. Evaluate the following limit. Show the algebraic details. (5 points) $\lim_{x \to \infty} \frac{2x^3 - 3x + 1}{x^3 + x^2 + x + 1}$

3. Let $f(x) = \sqrt{x}$. Use the definition of derivative to find f'(4). Then find the equation of the tangent line to the graph of f when x = 4. (5 points)

