Quiz **5**   Basic Calculus I

Name: _____

                                                           Math 110
Date: _____   **Wednesday, October 11, 2000**
Time Begun: _____   Ron Buckmire
Time Ended: _____   Alan Knoerr

Topic: Limits and Continuity

The idea behind this quiz is to assess your understanding of limits and your ability to evaluate them. In addition the connection between limits and continuity is stressed.

Instructions:

1. Once you open the quiz, **you have 30 minutes to complete it**.

2. You may use the handout on limits distributed in Class 19, but not your text or any other source, including course materials. You may use a calculator. You must work alone.

3. If you use your own paper, please staple it to the quiz before coming to class. If you don't have a stapler, buy one.

4. After completing the quiz, sign the pledge below stating on your honor that you have adhered to these rules.

5. Your solutions must have enough details such that an impartial observer can read your work and determine HOW you came up with your solution.

6. **This quiz is due on Friday, October 13**, at the beginning of class. NO LATE QUIZZES WILL BE ACCEPTED.

Pledge: I, _____, pledge my honor as a human being and Occidental student, that I have followed all the rules above to the letter and in spirit.

SHOW ALL YOUR WORK

This problem concerns the function $h(t) = \dfrac{3t \cdot (2^t - 4/3)}{1 - t}$.

(a) *(7 points.)* Use the rules for limits (as shown on the "Limits Handout" from *Class 19*) to evaluate $\lim_{t \to 2} h(t)$. Clearly show each step required in the process of evaluating the limit, using only one rule per step.

(b) *(3 points.)* Is $h(t)$ continuous at $t = 2$? Explain. (HINT: your result from (a) should help you answer this question.)