Math 236 Spring 2001 Name: _____

Quiz 7 (3/29) Circle one: 03/05

You have 20 minutes to take this quiz. Each problem will be graded for clarity of work as well as correctness, so show all work **clearly and in order**. Circle or otherwise indicate your final answers. Please note that there are problems on both the front and the back of this page.

YOU MAY USE CALCULATORS ON THIS QUIZ, WITH THE USUAL RESTRICTIONS.

All of the problems on this quiz are similar to homework problems.

1. (*5 points*) Determine if the following sequence converges, and if so find the limit.

$$\left\{ \frac{4n}{\sqrt{1+n^2}} \right\}$$

2. (*5 points*) Determine if the following sequence converges, and if so find the limit.

$$\left\{ \left(1+\frac{2}{n}\right)^{3n} \right\}$$

Turn over for more...

3. (*5 points*) Determine if the following sequence converges, and if so find the limit.

$$\left\{ \int_0^n e^{-x}\, dx \right\}$$

4. (*5 points*) Evaluate the following limit.

$$\lim_{x \to 0} \frac{2^{\sin x} - 1}{x}$$