

Name: \_\_\_\_\_

Date: \_\_\_\_\_

You may use HW6 as an aid on this quiz.

### Quiz 9

1. (5 points) Determine if the following sequence converges or diverges. If it converges, find its limit.

$$a_n = \frac{7^n}{8^{n-1}}.$$

2. (5 points) Show the sequence

$$a_n = \frac{n}{n^2 + 1}$$

is decreasing. Is it bounded?