

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

Score: \_\_\_\_\_

1. (a) State the limit comparison test. (2 points)

(b) State the root test. (2 points)

2. Determine whether each of the following series converges or diverges. (3 points each) Do each question using a second method for bonus 1 point.

(a)  $\sum_{n=1}^{\infty} \frac{2n^2+2}{(n-1)^2(n+1)^2}$

(b)  $\sum_{n=1}^{\infty} \frac{3^n}{2^n+4^n}$