

UNIT 6 – Test Review EXIT SLIP

Name Exempt PER _____ DATE _____

1. List the steps to calculate a series interval of convergence.

- Set up ratio of a_{n+1} and a_n
- Evaluate ~~the~~ infinite limit of ratio
- ~~Set~~ Create inequality with limit
- Solve inequality for x
- Test endpoints of inequality

2. For each series convergence test listed below, list the criteria for convergence.

Alternating Series Test $a_n = (-1)^n b_n$	$\lim_{n \rightarrow \infty} b_n = 0$ and $b_{n+1} < b_n$ for all $n > 0$
P-series $a_n = \frac{1}{n^p}$	$p > 1$
Geometric Series $a_n = (r)^n$	$r < 1$
Ratio Test	$\lim_{n \rightarrow \infty} \left \frac{a_{n+1}}{a_n} \right < 1$
Root Test	$\lim_{n \rightarrow \infty} \sqrt[n]{ a_n } < 1$

Suppose you applied the n-th term test to a series and it resulted in "10." What can you conclude?

The series diverges since the test did not result in a '0'.