Entry #: _____

Lesson 10.10: Interval of Convergence (by Ratio Test)

The _____ of convergence of a power series is the _____ from the center *c* at which the series will converge.

The **interval of convergence** is the range of *x*-values within which the series will converge.

Examples: Find the interval of convergence and the radius of convergence of the following power series.

1. $\sum_{n=1}^{\infty} \frac{2^n x^n}{n}$

2. $\sum_{n=0}^{\infty} \frac{(x+1)^n}{2^n}$

3. $\sum_{n=0}^{\infty} n!\, x^n$

4. $\sum_{n=0}^{\infty} \frac{(-1)^n x^{2n}}{(2n)!}$

Note: