

Name: _____ Sort #: _____

Worksheet 18
Power Series

MATH 2205, Fall 2018

1. Find the radius of convergence and interval of convergence for $\sum_{n=1}^{\infty} \frac{x^n}{n^4 4^n}$

2. Find the radius of convergence and interval of convergence for $\sum_{n=1}^{\infty} \frac{(x-2)^n}{n^n}$

3. Find a power series representation for the function $f(x) = \frac{2}{3-x}$ and determine the interval of convergence.

4. Evaluate $\int \frac{t}{1+t^3} dt$ as a power series and determine the radius of convergence.