

Math 181
Spring 2010

Name _____

HW #14
Due Tuesday, May 18

1. Find the interval of convergence for the power series.

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

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

2. Find the radius of convergence of $\sum_{n=0}^{\infty} n!x^n$

3. Find a power series for the function $f(x) = \frac{3}{x+2}$ and its domain.

4. Find a power series representation for $f(x) = \arctan x$.