Name _____

Homework 14
Sections 9.5 and 10.1

1. (4) Find the radius and interval of convergence of $\sum_{n=1}^{\infty}(-1)^n\frac{3^n}{n!}(x+4)^n$.

2. (4) Find the radius and interval of convergence of $\sum_{n=0}^{\infty} \frac{n!}{100^n}(x-3)^n$.

3. (4) Find the radius and interval of convergence of $\sum_{n=0}^{\infty} \frac{(n!)^2(x-6)^n}{(2n)!}$.

4. (4) Find the degree 10 Taylor polynomial approximating $f(x) = \cosh x$ near $x = 0$.

5. (4) Construct the Taylor polynomial of degree 3 approximating $f(x) = xe^{2x}$ near $x = 0$.