

Name _____

Homework 18
section 9.5

1. (5) Write the following series in summation (Σ) notation:

$$-1 + 2\frac{(x-2)^3}{3!} - 4\frac{(x-2)^6}{5!} + 8\frac{(x-2)^9}{7!} + \dots$$

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

3. (5) Find the interval of convergence of $\sum_{n=0}^{\infty} \frac{n!}{100^n} (x+1)^n$

4. (5) Find the interval of convergence of $\sum_{n=1}^{\infty} \frac{\ln n}{e^n} (x - e)^n$