408L CLASS PROBLEMS

APRIL 20TH, 2020

Problem 1. Determine the radius and interval of convergence of the power series $\sum_{n=0}^{\infty} nx^n$.

Problem 2. Determine the radius and interval of convergence of the power series $\sum_{n=0}^{\infty} \frac{x^n}{n!}$.

Problem 3. Find the radius and interval of convergence of $\sum_{n=1}^{\infty} n^n x^n$.

Problem 4. Find the radius and interval of convergence of $\sum_{n=1}^{\infty} \frac{x^n}{2^n(n^2+1)}$.

Problem 5. Find the radius and interval of convergence of $\sum_{n=1}^{\infty} \frac{x^n}{\log(n)}$.