EMCF39 – Math 1432, 13209

The answer sheet for this assignment can be found by logging into CourseWare at http://www.casa.uh.edu, selecting Math 1432(13209), clicking on the EMCF tab at the top of the page, and selecting EMCF39.

1. Give the radius of convergence for \( \sum_{n=0}^{\infty} \frac{x^n}{2n+1} \).
   a. \( \infty \)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.

2. Give the radius of convergence for \( \sum_{n=0}^{\infty} \frac{(-1)^n x^n}{2^n} \).
   a. \( \infty \)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.

3. Give the radius of convergence for \( \sum_{n=0}^{\infty} \frac{(2x)^n}{n^2 + 1} \).
   a. \( \infty \)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.

4. Give the radius of convergence for \( \sum_{n=0}^{\infty} \frac{(x-1)^n}{2n+1} \).
   a. \( \infty \)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.
5. Give the radius of convergence for \( \sum_{n=0}^{\infty} \frac{(x + 2)^n}{3^n} \).
   a. \(\infty\)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.

6. Give the radius of convergence for \( \sum_{n=0}^{\infty} \frac{x^n}{n!} \).
   a. \(\infty\)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.

7. Give the radius of convergence for \( \sum_{n=0}^{\infty} \frac{x^{2n-1}}{n!} \).
   a. \(\infty\)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.

8. Give the radius of convergence for \( \sum_{n=0}^{\infty} n!x^n \).
   a. \(\infty\)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.

9. Give the radius of convergence for \( \sum_{n=1}^{\infty} \frac{(-1)(x+1)^n}{n2^n} \).
   a. \(\infty\)
   b. 1
   c. 1/2
   d. 0
   e. 2
   f. None of these.
10. Give the radius of convergence for \( \sum_{n=0}^{\infty} \frac{n^2 (x-3)^n}{3n+1} \).

a. \( \infty \)
b. 1
c. 1/2
d. 0
e. 2
f. None of these.