

**DIRECTIONS** To receive full credit, you must provide complete legible solutions to the following problems in the space provided. No Attached papers. Transfer all your answers to the space provided.

1. Find the radius of convergence,  $R$ , of the series.

$$\sum_{k=2}^{\infty} \frac{x^{k+2}}{5k!}$$

2. Find the radius of convergence,  $R$ , of the series.

$$\sum_{i=1}^{\infty} \frac{2^n x^n}{n^3}$$

3. Find the radius of convergence,  $R$ , of the series.

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

4. Find the radius of convergence,  $R$ , of the series.

$$\sum_{n=1}^{\infty} \frac{(2x-1)^n}{3^n}$$