Section 11.8: Additional Problems

1. Find the radius and the interval of convergence for the power series.

$$\sum_{n=0}^{\infty} \frac{(-3)^n x^{2n}}{n+1}$$

2. Find the radius and the interval of convergence for the power series.

$$\sum_{n=0}^{\infty} \frac{3^n x^{2n}}{(2n)!}$$

3. Find the radius and the interval of convergence for the power series.

$$\sum_{n=0}^{\infty} \frac{3^{2n}(x-2)^n}{n+1}$$

4. Find the radius and the interval of convergence for the power series.

$$\sum_{n=0}^{\infty} \frac{\ln(n)(x-e)^n}{e^n}$$

5. Here is a power series in expanded form. Find the radius of convergence and the interval of convergence.

$1 + 5x + x^2 + 5x^3 + x^4 + 5x^5 + ...$

6. Find the radius and the interval of convergence for the power series.

$$\sum_{n=0}^{\infty} \frac{(2x+1)^{2n}}{8^n}$$