1. Determine whether each of the following series converges absolutely, converges conditionally, or diverges. Justify your answers.

(a) \( \sum_{n=7}^{\infty} \frac{(-1)^n}{n \ln(n)} \)

(b) \( \sum_{n=1}^{\infty} \sqrt{\frac{4n^2 - 2}{9n^2 + 4}} \)

(c) \( \sum_{n=3}^{\infty} \frac{5 + n}{n^2 \sqrt{4n - 1}} \)

2. Consider the power series

\[ \sum_{n=1}^{\infty} \frac{(x - 7)^n}{2n} \]

(a) Find the interval and radius of convergence of the power series.

(b) Find the function the power series represents on its interval of convergence.

3. [Bonus] Find the sum of the series

\[ \sum_{n=2}^{\infty} \frac{n^2 - n}{2^n} \]