NAME:_____

Instructions: This is your seventh quiz. This quiz will **NOT** be multiple choice, but will be a traditional quiz.

Problem 1: Find the radius of convergence of the power series

$$\sum_{n=0}^{\infty} (-1)^{n-1} \frac{x^n}{n^2 + 11}$$

You do not need to check the convergence at the endpoints.

Problem 2: Find the radius of convergence of the power series

$$\sum_{n=1}^{\infty} n! x^n$$

You do not need to check the convergence at the endpoints.

Problem 3: Find a power series for the following function and determine the radius of convergence:

$$f(x) = \frac{x}{9 + x^2}$$