

NAME: _____

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

Problem 1: Find the Taylor series for f centered at 1 given that

$$f^{(n)}(1) = \frac{(n-1)!}{2^n(n^2+1)}.$$

Additionally, compute the radius of convergence.

Problem 2: Compute the Maclaurin series for $f(x)$ and its radius of convergence:

$$f(x) = e^{7x}.$$

Problem 3: Compute the Maclaurin series for $f(x)$ and its radius of convergence:

$$f(x) = x^2 \sin(x).$$