

Name:

MATH 231 ED5 / Spring 2010

Quiz 9

Instructions: You have 15 minutes to complete this quiz. No calculators, notes, phones, socializing, or other suspicious behaviors are allowed. Read the problems carefully. Explain your answers and show your work.

1. Find the interval of convergence for the power series

$$\sum_{n=0}^{\infty} \frac{(-1)^n x^n}{7^n (3n + 5)}$$

2. Find a power series representation for the function

$$f(x) = \frac{x^5}{x^2 + 8}.$$

For which values of x is this representation valid?