Name:

MATH 231 ED5 / Spring 2010

Quiz 10

Instructions: You have 20 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.

You do NOT need to show that the given functions are equal to their Taylor series. You DO need to use the definition of the Taylor series to find the series (i.e., do NOT just manipulate a known series).

1. Find the Maclaurin series for $f(x) = \ln(1 + x)$. Also find the radius of convergence.

2. Find the Taylor series centered at $a = 2$ for
$$f(x) = \frac{1}{\sqrt{2x}}.$$