

MthU242  
Northeastern University  
Quiz #9  
20 Minutes

Calculus II  
Professor Gilmore  
Mar. 22, 2007

Name: \_\_\_\_\_.

Show All Your Work

1. Find the radius of convergence, and the interval of convergence, for the power series

$$\sum_{n=0}^{\infty} \frac{3^n (x+5)^n}{2^n}.$$

2. a. Consider the function  $\frac{2}{1-3x}$ . Express this function as a power series, centered at 0.

- b. Use the result in part a. to find a power series for the function

$$g(x) = \frac{1}{(1-3x)^2}$$

Name: \_\_\_\_\_.