

MthU242  
Northeastern University  
Quiz #9  
20 Minutes

Calculus II  
Professor Gilmore  
Mar. 22, 2007

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

Show All Your Work

1. a. Consider the function  $\frac{3}{1 + 2x}$ . 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

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

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

$$\sum_{n=0}^{\infty} \frac{2^n (x - 7)^n}{3^n}.$$

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