

**Quiz #1 · Friday February 30**  
**Show all of your work to get full credit.**

MATH 1234 · Fall 2099

Name \_\_\_\_\_

1. (5 points) Find the derivative of  $f(x) = (x^2 + 3x + 4)^3$  using the Chain Rule. You do not need to simplify the answer.

2. (5 points) Let  $f(x) = x^{11} - 9x^4 + 3x^3 + 8x^2 + 7x + 1 + x^{-1}$ .

- a) Find  $f'(x)$

- b) Find  $f''(x)$

- c) Find  $f''(x)$