

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

Section: \_\_\_\_\_

**Math 120A**

**Quiz 4**

**October 31, 2002**

Show all work for full credit (do not merely read a solution from a graph on your calculator, for instance).

1. (5 points) Let  $u(t)$  be the step function

$$u(t) = \begin{cases} 0 & \text{if } x < 0, \\ 1 & \text{if } 0 \leq x \leq 1, \\ 0 & \text{if } x > 1. \end{cases}$$

Give the multipart rule for the step function

$$u\left(\frac{t}{2} - 2\right) + u\left(\frac{t}{4} - 1\right).$$

2. (5 points) Find the inverse function of the function

$$f(x) = \frac{x}{3x + 1}.$$