Name: _____   Section: _____

Math 120AB   Quiz 2   January 22, 2004
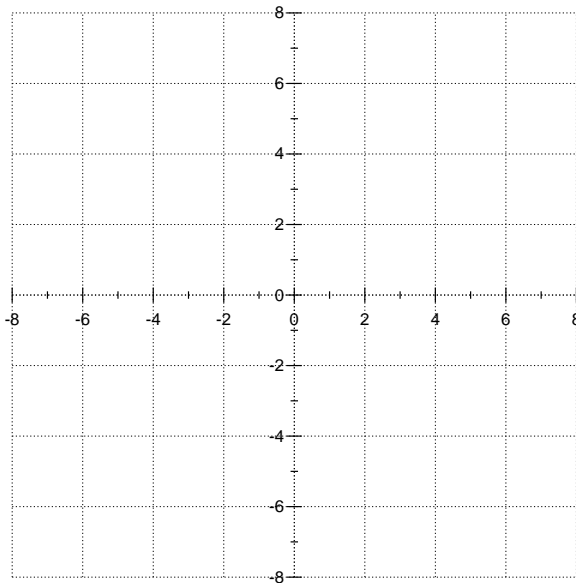
Show all work for full credit.

1. (5 points) Suppose that

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

Sketch a graph of $g(t) = -2u\left(\frac{1}{2}(t+4)\right)$ on the axis below.

2. (5 points) If $f(x)$ has domain $[-3, 8]$ and range $[2, 12]$, find the domain and range of the function

$$g(x) = \frac{1}{3}f(5(x-1)) - 2$$