Math 165: Honors Calculus I   Name:_____

Quiz 3   *September 16, 1999*

1. Define the following:

   a) A step function s on $[a, b]$.

   b) $\displaystyle\int_a^b s(x)\, dx$ where s is a step function on $[a, b]$.

2. Calculate $\displaystyle\int_0^5 \left[\sqrt{2x}\right] dx$ (where $[z]$ denotes the greatest integer less than or equal to z).

3. State and prove the Additivity with Respect to Intervals Property for integrals of step functions.