Math 210, Groves, Quiz 3
Thursday, September 15, 2011, 12pm.

Name: _____

Please write clearly and show all of your work.

1. Let $\mathbf{r}(t) = \langle e^{2t+5}, 3\sin(3t), \frac{1}{t} \rangle$, $t > 0$.

   (a) Compute $\mathbf{r}'(t)$;

   (b) Compute $\int_0^4 \mathbf{r}(t)dt$. [You don't need to simplify the number you get.]

2. Compute the length of the curve $\langle 2t, \ln(t), t^2 \rangle$ over the interval $1 \leq t \leq 4$.