Name: January 28, 2016 MAC 2313.8443 Cyr

> Quiz 3 You must show all work to receive full credit!!

Problem 1. (5 pts) Solve the initial value problem $\mathbf{r}'(t) = \langle 3t^2, 4t, 1 \rangle$ with $\mathbf{r}(1) = \langle 0, 1, 2 \rangle$.

Problem 2. (5 pts) Calculate the length of the curve $\mathbf{r}(t) = \langle 4 \sin t, 3 \sin t, 5 \cos t \rangle$ over the interval $0 \le t \le \pi$.