

## Quiz 5

MAC 2313

Fall 2006

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

Score: \_\_\_\_\_

**Show all of your work for full credit.**

1. Show that if  $|\vec{r}(t)| = c$ , (a constant), the  $\vec{r}'(t)$  is orthogonal to  $\vec{r}(t)$  for all  $t$ .

2. Find the linearization of the function  $f(x, y) = \frac{x}{y}$  at the point  $(6, 3)$ .