

Math 225: Calculus III

Name: _____

Quiz 3 *September 20, 2001*

Section: _____

1. Find a vector function $\mathbf{r}(t)$ that parameterizes the curve of intersection of the plane $x + 2y - z = 0$ with the surface $y = z^4$.

2. Determine the position vector, $\mathbf{r}(t)$, of a particle whose velocity is $\mathbf{v}(t) = 6(1+t)^5\mathbf{i} + \cos(t)\mathbf{j} + \cos(t)\mathbf{k}$, and whose initial position is $\mathbf{r}(0) = 4\mathbf{i} + \mathbf{j} + \mathbf{k}$.