

Math 2673

Special Assignment 3
(20 points)

Name:

Let $\vec{r} = \langle 3 \cos t, 3 \sin t, 4 \sin t \rangle$ be the position vector of a particle in space. Find the following:

- a) the velocity \vec{v}
- b) the speed v
- c) the unit tangent vector \vec{T}
- d) the acceleration \vec{a}
- e) the curvature κ